MODERN EUGENICS

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MODERN EUGENICS

FOR

MEN and WOMEN

A COMPLETE MEDICAL GUIDE TO A THOROUGH UNDERSTANDING OF THE PRINCIPLES OF

HEALTH

AND

SEX RELATIONS

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PREFACE

IN presenting to our readers the latest edition of "Modern Eugenics," completely revised and in all respects brought to date, the publishers and editors have been actuated by the desire to place into the hands of the people, old and young, an absolutely reliable, medical and hygienic counselor that may be consulted whenever occasion arises.

Numerous are the books whose authors have undertaken the dissemination of medical and sexual knowledge among the masses, but many of them contain a plethora of exaggerations and glowing reversals of facts that render them unsuitable for educational purposes. The chief aim of this book is to impart to its readers all information necessary to assure the happiness and welfare of those individuals who are fully conscious of the dangers of ignorance and desirous to learn all about the safeguards of life. In order to achieve this end it was imperative to strip the various subjects treated of all unnecessary embellishments and present them simply and unprudishly.

Hosts of intelligent women and men in all walks of life are realizing the necessity of medical instruction, especially of sex education of the young, and of intelligible information on disease prevention.

Until about a decade ago it was almost considered a crime to write about matters concerning sex, or even only hint at them; today, despite the protest of all reactionary forces, all thinking persons having the welfare of the race at heart are pleading for the public discussion of subjects pertaining to sex life and sexual relations.

Hence, in approaching the work we have undertaken in these pages, we have been moved by the pleading of our readers and friends and attempted to turn the searchlight of modern science on all subjects on which the people seek enlightenment and guidance with a view to utilizing

this knowledge so as to assure their individual happiness and prosperity. We are presenting all subjects in a straightforward manner, and if we may judge from the past popularity of the book this new edition is bound to meet with at least as favorable a reaction on the part of the public as the previous one.

We further wish to emphasize that with the publishing of this book we do by no means aim to treat disease. The work of healing rightfully belongs to the domain of the physician. Our purpose is to advise our readers so as to enable them to apply first-aid treatment in all cases of emergency when a competent physician is not immediately available, thus effectually assisting the great work of preserving and restoring health.

To this end it imparts practical instruction in medicine, hygiene and disease prevention, in sanitation and diet and in all sexual matters. It is especially on the last named subject that parents need information that they may be able to become teachers in their own homes.

Knowing the importance of proper intelligence concerning the laws which govern our bodies, who can deny the necessity of such instruction? Wherever we turn we notice the terrible consequences of the prevailing ignorance on the most vital and important subjects. This book in its first edition has been recognized and appreciated as a reliable, truthful and trustworthy guide in all situations where such a work is invaluable.

It is true, physicians do not all agree in their opinions on the evil results of ignorance, but they all recognize that much of human crime and misery is due to immorality born of ignorance. Now the question arises, how can these matters be taught? How can you best be educated? The editors of this book think the best way is to be frank and honest in the discussion of the various subjects and to present them fully.

All statements contained in this book are based on facts generally recognized by the medical science. The information advanced is in keeping with the best standards and the latest thought of the medical science and approved of by experienced medical writers and practitioners.

Recognizing the truth of the old adage that "an ounce of prevention is worth a pound of cure" and "that forewarned is forearmed," the authors

of this revised edition have given the subject of disease prevention special attention with a view to bringing this subject within the intellectual range of all whom nature has gifted with enough common sense to understand their significance and timely application.

We have devoted a separate chapter to sex education which has been conceived not as a complete treatise of the subject but as a brief outline of a course in a child's sexual education. Parents should know how to proceed in the way of imparting this knowledge to their children and if they feel that they are unable to do so they should engage a competent physician or teacher to undertake this educational work. If parents neglect their duty in this respect and allow their boys to acquire this knowledge later in life from evil and ignorant sources they will be responsible for the consequences, the moral depravity of which may manifest itself in their offspring.

Acknowledging the valuable aid from sources stated in another place we are sending out this work on its important errand with the steadfast hope that it may accomplish the great task for which it has been created.

THE EDITORS.

AUTHORITIES CONSULTED

TO make this book a modern and complete treatise on the subject of medicine, we have presented facts and opinions, gleaned not only from our own studies and experience, but also from the standard works of the leading authorities on the subjects treated, to which we are indebted for the information gained therefrom.

The eminent authors of these works, whose knowledge we have found so helpful, we list, with acknowledgment, below:

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Manual of Skin and Venereal Diseases

Compiled by over 200 specialists and published by the German Society of Dematologists in Berlin.

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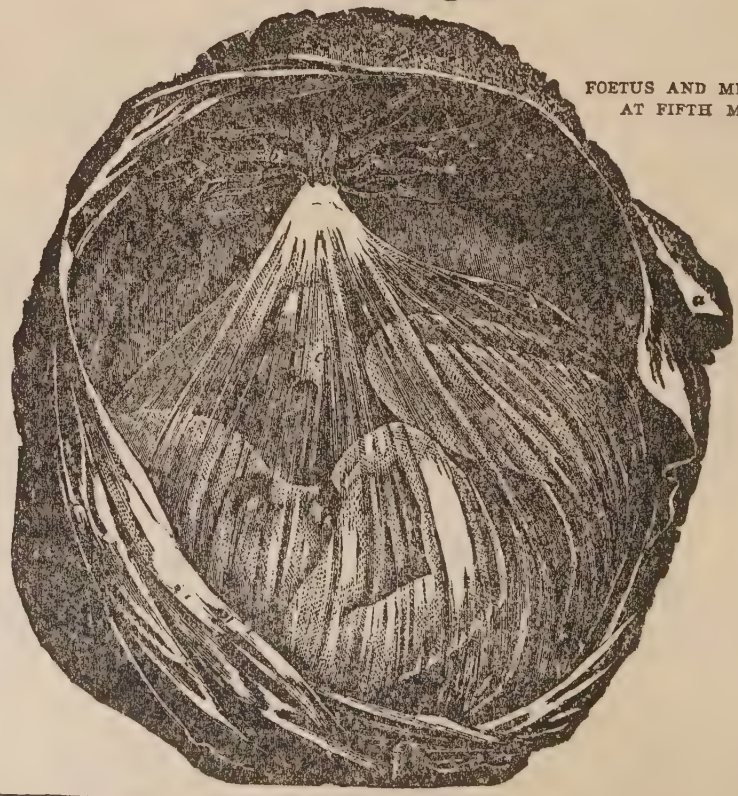
SECTION OF THE FEMALE PELVIS SHOWING VAGINA.



FOETUS AND MEMBRANES AT FIFTH MONTH.

INTRODUCTION

MAIDENHOOD, wifehood and motherhood and the ideal training for children are subjects which are beginning to attract no little attention throughout the country. Such has been the interest manifested in some sections, that societies have been organized for the cultivation and study of these subjects. Through these means we may anticipate, with all certainty, an improvement in woman's status, physically, mentally and morally. That perfect children are the greatest prize on earth no one will deny, and this is deservedly true in consideration of the fact that children are the prospective fathers and mothers of the next generation.

Child-bearing and rearing should be woman's chiefest study, as well as her crowning joy. It is feared by many on account of its suffering and hardships, but these horrors can be reduced to a minimum, indeed, avoided altogether, by proper knowledge and attention.

This same care and knowledge should extend also to the imparting of a healthy body, a cheerful spirit and a sound mental activity to the child. God has not invented stomachache or convulsions just to keep mothers busy, nor insanity just to keep one's faculties on the alert. All these symptoms are but signs of some deranged function, or an imperfection which can be avoided.

Female troubles, so disastrous to the happiness of women, can generally be traced to improper methods and habits in living, or to the first or subsequent confinement. This fact makes it doubly certain that knowledge of these conditions can not begin too early.

The principles governing confinement and recovery are so simple to-day, compared with the past, that we are confident that we shall see the day when the laborious child-birth will be looked upon as proof of

a mistake. Among other great reforms may be mentioned the limitation of offspring, the defects of heredity, skin troubles, etc.

Foremost in these movements stand the Woman's Christian Temperance Union. Organized primarily to eradicate the evils of drunkenness from the country, they found, when brought face to face with the subject, that a serious problem confronted them; that intemperance in the life of any individual was but a chapter in his history, a chapter whose beginnings lay deep in the mysteries of being.

With a courage born of conviction that future generations can be bettered only by bettering the present, they have taken steps toward permanent reform by an enlightenment of the people.

This is altogether in line with the work which we hope to aid through the agency of this volume—to instruct women in what manner they are directly or remotely responsible for much of their own sufferings, as well as those of their children; and how this may be avoided. That it may have a wide circulation and become an uplift to all who peruse its pages is the sincere wish of

THE AUTHOR.

PERFECT WOMANHOOD

PART I

THE HUMAN BODY

CHAPTER I

THE BODY THE TEMPLE OF THE SOUL

ONE of the most significant sayings of the Bible is the following: "The spirit of man is the candle of the Lord."

Let us think about this candle: We place it on a table. It is not yet lighted. We do not know just what amount of circle it will reclaim from darkness. We apply the match. It is soon settled. We now know how much it will do for a dark room.

That light represents man's spirit—his sphere of influence. As the candle burns down the quality of the elements are brought into view. If pure, the light shines steadily, without noise or agitation. If by chance foreign substance gets into the wick or tallow the light grows dim, splutters, and finally goes out. No impurities are allowed if the light is to shine. The candle is a symbol of life—it is the soul.

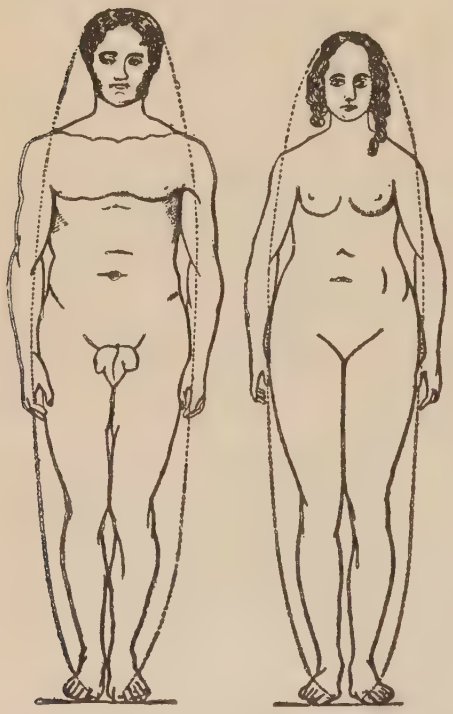
THE HUMAN BODY

The temple of the soul is the body—it is the home of music, of high thought, of kindly deed and noble example. Sunlight falls on its roof and windows; storms beat on its transept and nave, and yet it stands.

No human architect, however famous, can build a temple, even though of gold and precious stones, which can for a moment equal in mechanism one tiny human body. No hinges on doors of bronze or glass

can ever compare in ease and nicety to the natural bend of the knee or elbow, to the arch and spring of the foot, or to the curve of the neck and spine. No marble dome, even in the remotest way, can approach the dome where man's intellect weaves its marvelous mystery of human plan and eternal endeavor.

See the hand, that master of detail, how it works out the thought of the mind on canvas or stone; how it grasps the sword or how it untangles the knotted web. See the eye, how it becomes a mirror in its power to discern and reflect. See the veins, how like canals they become; how the arteries appear like streams, each having locks and dams which lift and hold back the mysterious fleets and fluids of life.



Difference in Form of Man and Woman.

The heart, too, so little that it can easily be held in your hand, yet night and day, by moment and by years, you hear it beating, as if an army was always on the move. Sometimes the beat falters. It is as if one of the soldiers had stumbled over something in the dark. That stumbling, the out of step, is a sharper warning than a sentinel's challenge—Who goes there? In its intricacies and its delicacy we might well wonder that we live at all, yet the mystery is—that so beautiful a structure could ever be destroyed. The Greeks are said to have possessed at one time the ideal bodily temple; that their sculptures—the despair of the world to-day, were not ideals, but simply the realization of the perfect body—the Greeks themselves. We are also told that men with perfect physiques were then as

common in Athens as pebbles in her streets. A sound mind in a sound body was the inspiration which touched their lives.

It is not an idle fancy to say that as the farmer goes down deep into the well for cool water, the mind should go down deep into the resources of life for strength. Life comes from breath. The air contains invisible elements of those things which we eat and is immediately brought into the current of the blood. Let us learn to breathe deeper—breathe more freely—study nature—think purer thoughts—practice culture of the body and thus make the temple indeed a fit dwelling place for the soul. We hear no sounds of hammer, but the building never ceases.

CHAPTER II

THE UNFOLDING OF WOMANHOOD

LONGFELLOW'S poem, entitled "Maidenhood," begins like this:

"Standing with reluctant feet,
Where the brook and river meet,
Womanhood and childhood fleet!"

These are beautiful words, but later on it says:

"O, thou child of many prayers,
Life hath quicksands—Life hath snares.
Care and age come unawares."

"Nature gives to every person and season some beauties of its own; and from morning to night, as from the cradle to the grave, is but a succession of changes so gentle and easy that we can scarcely mark their progress."

Very few children can be left to "jus' grow" as Topsy did. Their pathway must be illuminated by love and wisdom, that they may conform to, and not transgress the laws of being.

"Know thyself" is a true maxim, and especially is it important for girls. They ever want to grow up attractive and beautiful. Some girls, however, think that bright eyes, pretty hair and fine clothes, alone, make them beautiful. This is a mistake; real beauty depends upon good health, good manners and a pure mind.

In this living, moving world, it behooves us to plan an active, happy life and then look forward with hope and pleasure to its realization. Should health be blighted there would be nothing in the future but trials and discouragements.

As the happiness of our girls depends mainly upon their health, it behooves us all to guide them in such a way as to enable them to realize the highest ideal.

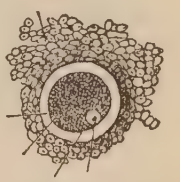
There is no one who stands so near the girl as the Mother. From early childhood she occupies the first place in the little one's confidence—

she laughs, plays, and corrects, when necessary, the faults of her darling.

She should be equally ready to guide in the important laws of life and health upon which rest her future. She should teach the daughters that in all things the "creative principle" has its source in life itself; that it originates from Divine life, and that it may be consecrated to wise and useful purposes. With this knowledge they are apt never to grow up with base thoughts or with bad habits. Their lives, on the contrary, become a happiness to themselves and a blessing to humanity.

ALL LIFE ORIGINATES FROM A SEED

Teach the daughters that all life originates from a seed—a germ. Knowing this law, you need have no fears that base or unworthy thoughts of the reproductive function can ever enter their minds. The growth, development and ripening of human seed becomes a beautiful and sacred mystery. The tree, the rose and all plant-life are equally as mysterious and beautiful in their reproductive life. Does not this alone prove to us, conclusively, that there is a Divinity in the background, governing, controlling and influencing our lives? Nature has no secrets, and why should we? None at all. The only care we should experience is in teaching wisely.



Vital Center of Ovum.

Yes—lead them wisely—teach them that the seed, the germ of a new life, is maturing within them. Teach them that between the ages of eleven and fourteen this maturing process has certain physical signs. The breasts grow round and full, the whole body, and even the voice, undergoes a change. It is right that they should be taught the natural law of life in reproduction and the physiological structure of their being.

Again, we repeat that these lessons should be taught by the mother, and in a tender, delicate and confidential way. Become, oh, mother, your daughter's companion, and she will not go elsewhere for this knowledge —which must come to all in time, but possibly too late and through sources that would prove more than harmful.

THE ORGANS OF CREATIVE LIFE

The organs of creative life in woman consist of ovaries, Fallopian tubes, uterus, vagina and mammary glands.

The ovaries are two in number, situated behind and below the Fallopian tubes, one on each side of the womb; they are about the size of a plum-pit and shaped something like an egg. In structure they are firm and compact, consisting of a fibrous tissue, amply provided with blood vessels.

The Fallopian tubes are about four inches in length, branching from each upper angle of the womb. These are very minute canals, widening gradually into a funnel-shaped end, the edges of which are surrounded by the fimbriæ, fringe-like processes, embracing the ovaries, and which convey the ova to the cavity of the womb.

Fallopian Tube.

The Uterus is a pear-shaped muscular organ, situated in the lower portion of the pelvis, between the bladder and the rectum. It is less than three inches in length and two inches in width and one in thickness.

POSTERIOR VIEW OF THE UTERUS AND ITS APPENDAGES.

a. Fundus, *b*, body, and *c*, cervix of the uterus, laid open. *d.* The os uteri externum, laid open. *e.* The interior of the upper part of the vagina. *f.* Section of the walls of the uterus. *i.* Opening into Fallopian tube. *o.* Ovary. *p.* Ligament of ovary. *r.* Broad ligament. *s.* Fallopian tube. *t.* Fimbriated extremity

The Vagina is a membraneous canal, which joins the internal outlet with the womb, which projects slightly into it. The opening into the vagina is nearly oval, and in those who have never indulged in sexual intercourse or in handling the sexual organs is more or less closed by a membrane termed the Hymen. The presence of this membrane was formerly considered as undoubted evidence of virginity, its absence a lack of chastity.

The Mammary Glands are accessory to the generative organ. They secrete milk which the All-Wise Father provided for the nourishment of the child after birth.

ANTERIOR VIEW OF THE UTERUS AND ITS APPENDAGES.

a. Fundus, *b*, body, and *c*, cervix or neck of the uterus. *e*. Front of the upper part of the vagina. *n, n*. Round ligaments of the uterus. *r, r*. Broad ligaments. *s, s*. Fallopian tubes. *t*. Fimbriated extremity. *u*. Ostium abdominale. The position of the ovaries is shown along the lower border of the broad ligaments and across the uterus.

Menstruation, which appears about the age of thirteen years, is the flow from the uterus that occurs every month as the seed germ ripens in the ovaries. God made the sexual organs so that the race should not die out. He gave them to us so that we reproduce life and thus fill the highest position in the created universe. The purpose for which they were made is high and holy and honorable, and if they are used only for this purpose—and they must not be used at all until they are fully matured—they will be a source of greatest blessings to us all.

A careful study of this organ, of its location, of its arteries and nerves, will convince the growing girl that her body should never submit to corsets and tight lacing in response to the demands of fashion, even though nature has so bountifully provided for the safety of this important organ. By constant pressure the vagina and womb may be compressed into one-third their natural length or crowded into an unnatural position. We can readily see, then, the effect of lacing or tight clothing. Under these circumstances the ligaments lose their elasticity, and, as a result, we have Prolapsus or Falling of the Womb.

I am more anxious for growing girls than for any other earthly object; these girls are to be the mothers of future generations; upon them hangs the destiny of the world in coming time, and if they can be made to understand what is right and what is wrong with regard to their own bodies, now, while they are young, the children they will give birth to, and the men and women who shall call them mother will be of a higher type and belong to a nobler class than those of the present day.

All women can not have good features, but they can look well, and it is possible to a great extent to correct deformity and develop much of the figure. The first step to good looks is good health, and the first element of health is cleanliness. Keep clean—wash freely, bathe regularly. All the skin wants is leave to act, and it takes care of itself.

Girls sometimes get the idea that it is nice to be "weak" and "delicate," but they can not get a more false idea! God meant women to be strong and able-bodied, and only by being so can they be happy and capable of imparting happiness to others. It is only by being strong and healthy that they can be perfect in their sexual nature; and it is only by being perfect in this part of their being that you can become a noble, grand and beautiful woman.

THE AGE OF PUBERTY

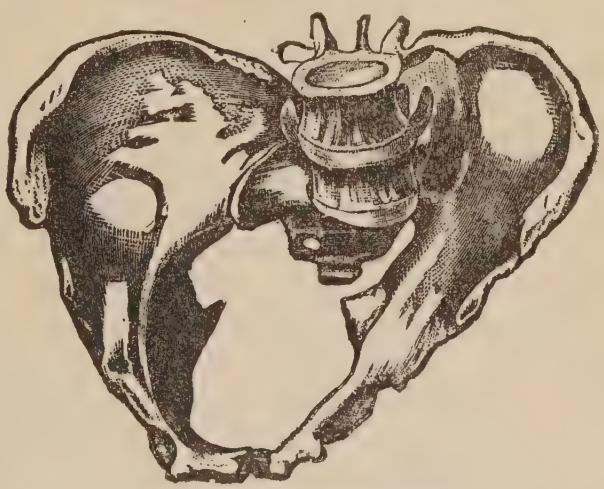
Up to the age of puberty, if the girl has grown naturally, waist, hips and shoulders are about the same in width, the shoulders being, perhaps, a trifle the broadest.

THE GROWTH OF THE SEXUAL ORGANS

Up to this time the sexual organs have grown but little. Now they take a sudden start and need more room. Nature aids the girl; the tissues and muscles increase in size and the pelvic bones enlarge. The limbs grow plump, the girl stops growing tall and becomes round and full. Unsuspected strength comes to her; tasks that were once hard to perform are now easy; her voice becomes sweeter and stronger. The mind develops more rapidly even than the body; her brain is more active, quicker; subjects that once were dull and dry have unwonted interest; lessons are more easily learned; her eyes sparkle with intelligence, indicating increased mental power; her manner denotes the consciousness of new power; toys of childhood are laid away; womanly thoughts and pursuits fill her mind; budding childhood has become blooming womanhood.

THE LAW OF A PERFECT FIGURE

Now, if ever, must be laid the foundation of physical vigor and of a healthy body. Girls should realize the significance of this fact. Do not get the idea that men admire a weakly, puny, delicate, small-waisted, languid, doll-like creature, a libel on true womanhood. Girls admire men with broad chests, square shoulders, erect form, keen bright eyes, hard muscles and undoubted vigor. Men also turn naturally to healthy, robust, well-developed girls, and to win their



FLATTENED OR DEFORMED PELVIS.

From a casual glance at plate, it will be seen that the size and shape of the pelvis may have much to do with the ease or pains of labor

admiration, girls must meet their ideals. A good form, a sound mind and a healthy body are within the reach of nine out of ten of our girls, by proper care and training. Physical bankruptcy may claim the same proportion, if care and training are neglected

LAW OF PROPORTIONS

We have said that a good form is within the reach of a large majority of our girls, and many are undoubtedly anxious to know how. There is a law of proportion which enables the expert naturalist to tell the height, breadth and size of an animal if a single bone be given him. This law of proportion, carried out in every detail, makes the well-known Statue of Venus de Capitolina the ideal of female development. Measure it and the waist will be found to be two-fifths of the height and nine inches less than the measure at the top of the hips. A woman five feet five inches tall should, then, measure twenty-six inches round the waist, and thirty-five inches around the hips. This test can, of course, only be applied to those who have reached their growth. A woman five feet tall should measure two feet around the waist and thirty-three inches around the hips. A waist less than this proportion indicates compression either by lacing or tight clothing. Exercise in the open air, take long walks and vigorous exercise, using care not to over-do. Housework will prove a panacea for many of the ills which flesh is heir to. One hour's exercise at the wash tub is of far more value, from a physical standpoint, than hours at the piano. Boating is a most excellent exercise, and within the reach of many. Care in dress is also important, and, fortunately, fashion is coming to rescue here. It is essential that no garments be suspended from the waist. Let the shoulders carry the weight of all the clothing, so that the organs of the body may be left free and unimpeded.

Sleep should be had regularly and abundantly. Avoid late hours, undue excitement, evil associates, partake of plain, nutritious food and health will be your reward. There is one way of destroying health, which, fortunately, is not as common among girls as boys, and which must be mentioned ere this chapter closes.

"Life hath quicksands—Life hath snares," is pregnant with meaning to mother-hearts. So many of the quicksands and snares have their foundation in the ignorance of the meaning of womanhood.

"I am more and more convinced that right knowledge is not only a safe-guard of purity, but is really the creator of true modesty. To give a young person a reverent knowledge of self is to insure that delicacy of thought which preserves the bloom of modesty."

Self-abuse is practiced among growing girls to such an extent as to arouse serious alarm. Many a girl has been led to handle and play with her sexual organs through the advice of some girl who has obtained temporary pleasure in that way, or, perchance, chafing has been followed by rubbing until the organs have become congested with blood, and in this accidental manner the girl discovered what seems to her a source of pleasure, but which, alas, is a source of misery, and even death.

SELF-ABUSE AND ITS EVILS

As in the boy, so in the girl, self-abuse causes an undue amount of blood to flow to those organs, thus depriving other parts of the body of its nourishment, the weakest part first showing the effect of want of sustenance. All that has been said upon this loathsome subject in the chapter for boys might well be repeated here, but space forbids.

Read that chapter again, and know that the same signs which betray the boy, will make known the girl addicted to this vice. The bloodless lips, the dull, heavy eye surrounded with dark rings, the nerveless hand, the blanched cheek, the short breath, the old, faded look, the weakened memory, and silly irritability tell the story all too plainly. The same evil result follows, ending perhaps in death, or worse, in insanity. Aside from the injury the girl does to herself by yielding to this habit, there is one other reason which appeals to the conscience, and that is, self-abuse is an offense against moral law—it is putting to a vile, selfish use the organs which were given only for a high, sacred purpose.

Let them alone, except to care for them when care is needed, and they may prove the greatest blessing you have ever known. They were given

you that you might become a mother, the highest office to which God has ever called one of His creatures. Do not debase yourself and become lower than the beasts of the field.

If this habit has fastened itself upon any one of our readers, stop it now. Do not allow yourself to think about it; give up evil associations, seek pure companions, and go to your mother, older sister, or physician for advice.

And you, mother, knowing the danger that besets your daughters at this critical point, are you justified in keeping silent? Can you be held guiltless if your daughter ruins body and mind because you were too modest to tell her the laws of her being? There is no love that is dearer to your daughter than yours, no advice that is more respected than yours, no one whose warning would be more potent. Fail not in your duty. As motherhood has been your sweetest joy, so help your daughter to make it hers.

Come stand by my knee, little children
Too weary for laughter or song;
The sports of the daylight are over,
The evening is creeping along.
The snow-fields are white in the moonlight,
The winds of the winter are chill,
But under the sheltering roof-tree
The fire shineth ruddy and still.

Now come to your rest, little children,
And over your innocent sleep,
Unseen by your vision, the angels
Their watch through the darkness shall keep.
Then pray that the Shepherd who guideth
The lambs that he loveth so well,
May lead you, in life's rosy morning,
Beside the still waters to dwell.

CHAPTER III

OUR BOYS—THE FATHERS OF THE NEXT GENERATION

ALTHOUGH this book is intended mostly for maidens, wives and mothers, yet there is nothing that greater interests us all than the subject of manhood, and a few words as to their peculiar tendencies will not be amiss. Every mother, whether she be rich or poor, old or young, educated or ignorant, is anxious that her son grow up in the path of purity, love and honor. "As the child, so is the man," is as true to-day as of old.

How grand is the boy who has kept himself undefiled! His complexion clear, his muscles firm, his movements vigorous, his manner frank, his courage undaunted, his brain active, his will firm, his self-control perfect, his body and mind unfolding day by day. His life should be one song of praise and thanksgiving.

If you want your boy to be such a one, train him, my dear woman, to-day, and his to-morrow will take care of itself.

Think you that good seed sown will bring forth bitter fruit? A thousand times, No! As we sow, so shall we reap. Train your boys in morality, temperance and virtue. Teach them to embrace good and shun evil. Teach them the true from the false; the light from the dark. Teach them that when they take a thing that is not their own, they commit a sin. Teach them that sin means disobedience of God's laws of every kind.

Teach them, too, that when God formed the body, he made laws by which every part of that body should be governed. He made a law for the eye; it should have light or it would become useless. He made a law for the skin; that it should be kept clean, or the pores (of which it contains millions) would be clogged and prevent the impurities of the body from passing away. He made laws by which the food we eat shall be digested and go to make blood, bone, muscle, nerve and brain.

Disobedience to any of these laws is sin, and if the disobedience is continued, suffering is sure to follow.

God made every organ of our body with the intention that it should perform a certain work. If we wish to see, we use our eyes; if we want to hear, our ears are called into use. In fact, nature teaches us the proper use of all our organs.

GO TEACH YOUR BOY

I say to you, mother, and oh, so earnestly: "Go teach your boy that which you may never be ashamed to do, about these organs that make him specially a boy."

Teach him they are called sexual organs, that they are not impure, but of special importance, and made by God for a definite purpose.

Teach him that there are impurities taken from the system in fluid form called urine, and that it passes through the sexual organs, but that nature takes care of that.

Teach him that these organs are given as a sacred trust, that in maturer years he may be the means of giving life to those who shall live forever.

Impress upon him that if these organs are abused, or if they are put to any use besides that for which God made them—and He did not intend they should be used at all until man is fully grown—they will bring disease and ruin upon those who abuse and disobey those laws which God has made to govern them.

If he has ever learned to handle his sexual organs, or to touch them in any way except to keep them clean, not to do it again. If he does, he will not grow up happy, healthy and strong.

Teach him that when he handles or excites the sexual organs, all parts of the body suffer, because they are connected by nerves that run throughout the system, this is why it is called "self-abuse." The whole body is abused when this part of the body is handled or excited in any manner whatever.

Teach them to shun all children who indulge in this loathsome habit, or all children who talk about these things. The sin is terrible, and is, in

fact, worse than lying or stealing! For, although these are wicked and will ruin their soul, yet this habit of self-abuse will ruin both soul and body.

If the sexual organs are handled it brings too much blood to these parts, and this produces a diseased condition; it also causes disease in other organs of the body, because they are left with a less amount of blood than they ought to have. The sexual organs, too, are very closely connected with the spine and the brain by means of the nerves, and if they are handled, or if you keep thinking about them, these nerves get excited and become exhausted, and this makes the back ache, the brain heavy and the whole body weak.

It lays the foundation for consumption, paralysis and heart disease. It weakens the memory, makes a boy careless, negligent and listless.

It even makes many lose their minds; others, when grown, commit suicide.

How often mothers see their little boys handling themselves, and let it pass, because they think the boy will outgrow the habit, and do not realize the strong hold it has upon them! I say to you, who love your boys—"Watch!"

Don't think it does no harm to your boy because he does not suffer now, for the effects of this vice come on so slowly that the victim is often very near death before you realize that he has done himself harm.

The boy with no knowledge of the consequences, and with no one to warn him, finds momentary pleasure in its practice, and so contracts a habit which grows upon him, undermining his health, poisoning his mind, arresting his development, and laying the foundation for future misery.

DO NOT READ AND FORGET

Do not read this book and forget it, for it contains earnest and living truths. Do not let false modesty stand in your way, but from this time on keep this thought in mind—"the saving of your boy." Follow its teachings and you will bless God as long as you live. Read it to your neighbors, who, like yourself, have growing boys, and urge them, for the sake of humanity, to heed its advice.

Right here I want to relate a fact that came under my observation. In our immediate neighborhood lived an intelligent, good and sensible couple. They had a boy about five years of age who was growing fretful, pale and puny. After trying all other remedies to restore him to vigor of body and mind, they journeyed from place to place, hoping to leave the offending cause behind.

I had often suggested to the mother that "self-abuse" might be the cause, but no, she would not have it so, and said, "You must be mistaken, as he has inherited no such tendencies, nor has he been taught it by playmates—we have guarded him carefully."

Finally, however, she took up a medical book and made a study of it and, after much thought, said, "I can not believe it, yet it describes Charlie's case exactly. I will watch."

To her surprise, she found, notwithstanding all her convictions to the contrary, that Charlie was a victim to this loathsome habit.

On going to his bed, after he had gone to sleep, she found his hands still upon the organ, just as they were when he fell asleep. She watched this carefully for a few days, then took him in her confidence and told him of the dreadful evil effects. Finding the habit so firmly fixed, she feared that telling him, at his age, what effect it would have upon his future would not eradicate the evil as soon as she hoped so, after studying the case for a time, she hit upon the following remedy. Although unscientific, literally speaking, it had the desired effect. Feeling that something must be done to stop, and stop at once, the awful habit, she said, "Did you know, Charlie, that if you keep up this habit of 'self-abuse' that a brown spot will come on your abdomen, light brown at first, and grow darker each week, until it eats a sore right into your system, and if it keeps on, will eventually kill you?"

After Charlie had gone to sleep, and finding his hands again on the sexual organs, to prove to him the truth of her argument, she took a bottle of "Iodine" and, with the cork, put on the abdomen a quantity sufficient to give it a light-brown color, and about the size of a pea. Next night, in bathing him, she discovered the spot, and said, "Look! already

it has come!" The boy cried out in very fear, and promised not to repeat it again.

The next night the mother put on a second application, which made the spot still darker and a trifle sore. Charlie watched the spot as he would a reptile that was lurking about to do his deadly work—and the mother was never again obliged to use the "Iodine." Of course, she told Charlie that when he entirely stopped the habit, the spot would disappear. She also took the precaution of letting him go to bed with a doll, a stuffed dog, or some plaything to handle and cuddle until he outgrew the habit.

Whether this mother was wise we would hardly want to say. In her case it was, perhaps, a bright thought, but if the child, through others, should have known of his mother's false method to cure the evil, all effect would have been lost, and no doubt he would have lost faith in his mother. In mature years, though, if cured by this simple remedy, he would thank his mother to the bottom of his heart.

Right here we want to emphasize the importance of cleanliness. We verily believe that oftentimes these habits originate in a burning and irritating sensation about the organs, caused by a want of thorough washing.

CIRCUMCISION

It is worthy of note that many eminent physicians now advocate the custom of circumcision, claiming that the removal of a little of the foreskin induces cleanliness, thus preventing the irritation and excitement which come from the gathering of the whitish matter under the foreskin at the beginning of the glands. This irritation being removed, the boy is less apt to tamper with his sexual organs. The argument seems a good one, especially when we call to mind the high physical state of those people who have practiced the custom.

Happy is the mother who can feel she has done her duty, in this direction, while her boy is still a child.

For those mothers, though, whose little boys have now grown to boyhood with the evil still upon them, and you, through ignorance, permitted it, we would say, "Begin at once—it is never too late."

If he has not lost all will-power he can be saved. Let him go in confidence to a reputable physician and follow his advice. Simple diet, plentiful exercise in open air, and congenial employment will do much. Do not let the mind dwell upon evil thoughts, shun evil companions, avoid vulgar stories, sensational novels, and keep the thoughts pure.

Let him interest himself in social and benevolent affairs, participate in Sunday School work, farmers' clubs, or any organizations which tend to elevate and inspire noble sentiment.

Let us remember that "a perfect man is the noblest work of God."

God has given us a life which is to last forever, and the little time we spend on earth is as nothing to the ages which we are to spend in the world beyond; so our earthly life is a very important part of our existence, for it is here that the foundation is laid for either happiness or misery in the future. It is here that we decide our destiny, and our efforts to know and obey God's laws in our bodies as well as in our souls will not only bring blessings to us in this life, but never-ending happiness throughout eternity.

THE VERY BEST MEDICINE FOR A BOY

If a bedroom is close, the sleep, instead of being calm and refreshing, is broken and disturbed; when the boy awakes in the morning he feels more fatigued than when he retired to rest. If sleep is to be refreshing the air must be pure and free from carbonic acid gas, which is constantly being evolved from the lungs. If the sleep is to be health-giving, the lungs ought to have oxygen—their proper food—and not to be cheated by giving them instead a poison—carbonic acid gas.

It would be well for each person to have a separate room. If two boys are obliged to sleep in one room, or if two girls are compelled to occupy the same chamber, by all means let each have a separate bed, as it is much more healthy and expedient for both boy and girl to sleep alone.

Plants and flowers ought not to be allowed to remain in a chamber at night. Experiments have proved that plants and flowers in the daytime take up carbonic acid gas (the refuse of respiration), and give off oxygen

(a gas so necessary and beneficial to health), but give out at night a poisonous exhalation.

EARLY TO BED AND EARLY TO RISE

is an old, but a good saying. Early rising cannot be too strongly insisted upon; nothing is more conducive to health and thus to long life. A youth is frequently allowed to spend the early part of the morning in bed, breathing the impure atmosphere of a bedroom, when he should be up and inhaling the balmy and health-giving breezes of the morning. If early rising is commenced in childhood it becomes a habit, and will continue through life. A boy ought on no account to be roused from his sleep; but as soon as he is awake in the morning he should be encouraged to rise. Dozing—that state between sleeping and waking—is injurious; it enervates both body and mind and is as detrimental to health as dram drinking. But if he rises early he must go to bed betimes; it is a bad practice to keep him up until the family retires to rest. He ought to seek his pillow by nine o'clock and should rise as soon as he awakes in the morning.

The number of hours of sleep required will depend upon the exercise he takes, but, on an average, he should have at least eight hours every night

CHOICE OF PROFESSION OR TRADE

If a youth is delicate it is a common practice among parents either to put him to some light indoor trade, or if it can be afforded, to one of the learned professions. Such a practice is absurd and full of danger. The close confinement of an indoor trade is highly prejudicial to health. The hard reading requisite to fit a man to fill, for instance, the sacred office, only increases any delicacy of constitution. The stooping at a desk, in an attorney's office, is most trying to the chest. The harass, anxiety, disturbed nights, interrupted meals, and intense study necessary to fit a man for the medical profession is still more dangerous to health than either law, divinity, or any indoor trade. If a boy is delicate or of consumptive habit, an outdoor calling should be advised, such as that of a farmer, a tanner, a

land surveyor or a butcher. Tanners and butchers are seldom known to die of consumption.

I cannot refrain from reprobating the too common practice among parents of bringing up their boys to the professions. The anxieties and the heartaches which they undergo if they do not succeed materially injure the health.

In closing this chapter I can only add the following words in behalf of the friendless boys—those who have no mother to teach them:

"When you see a ragged urchin
Standing wistful in the street,
With torn hat and kneeless trousers,
Dirty face and bare red feet;
Pass not by the child unheeding,
Smile upon him. Mark me, when
He's grown he'll not forget it,
For, remember, boys make men."

PART II

LOVE, COURTSHIP AND MARRIAGE

CHAPTER IV

QUALIFICATIONS FOR MARRIED LIFE

"ALL mankind loves a lover," says Emerson; and it would be difficult to name three subjects more generally thought about and speculated upon than Courtship, Love and Wedlock. Like the three-leaf clover, they spring from a single stem, and, like the clover, should bring forth blossom and fruit. With Tennyson we may say:

"'Tis better to have loved and lost, than never to have loved at all."

LOVE AND MARRIAGE NATURAL

"God created male and female. Male and female created he them." The double clause is too significant to be overlooked. Each is a counterpart of the other—something not complete without the two. Anything so divinely appointed as marriage coming to us from Eden should be looked upon as one of the most sacred things of earth.

Love blends young hearts in blissful unity, and, for the time, so ignores past ties and affections, as to make willing separation of the son from his father's house, and the daughter from all the sweet endearments of her childhood's home, to go out together, and rear for themselves an altar, around which shall cluster all the cares and delights, the anxieties and sympathies of the family relationship; this love, if pure, unselfish and discreet constitutes the chief usefulness and happiness of human life. Without it there would be no organized households, and, consequently, none of that earnest endeavor for competence and respectability which is the mainspring to human effort; none of those sweet, softening, restraining and elevating influences of domestic life which can alone fill the earth with glory.

Love is the sun of life; most beautiful in morning and evening, but warmest and steadiest at noon. Misery, some say, grows out of married life; so does the deepest joy. The misery is not against marriage itself, but against wrong, foolish marriages. These every parent should guard against. As the laws of reproduction are unchangeable, and as perfection is only in proportion to obedience to these laws, it is necessary that we comply with these requirements of nature.

WOMAN'S LOVE STRONGER THAN DEATH

Woman's love is stronger than death; it rises superior to adversity, and towers in sublime beauty above the niggardly selfishness of the world. Misfortune cannot suppress it; enmity cannot alienate it; temptation cannot enslave it. It is the guardian angel of the nursery and the sick bed; it gives an affectionate concord to the partnership of life and interest; circumstances cannot modify it; it ever remains the same to sweeten existence, to purify the cup of life on the rugged pathway to the grave, and melt to moral pliability the brittle nature of man. It is the ministering spirit of home, hovering in soothing caresses over the cradle, and the death-bed of the household, and filling up the urn of all its sacred memories.

REQUISITES NECESSARY FOR COMPANIONSHIP

You ask what is meant by a companion? We reply, a congenial spirit. one possessed of an interior constitution of soul similar to our own, or similar age, opinions, tastes, habits, modes of thought and feeling. A congenial spirit is one who, under any given combination of circumstances, would be affected, and feel and act as we ourselves would. It is one who would enjoy what we would enjoy, dislike what we would dislike, approve what we would approve, and condemn what we would condemn, not for the purpose of agreeing with us, but of his or her own free will. This is a companion; one who is kindred in soul with us; who is already united to us by the ties of spiritual harmony; which union it is the object of courtship to discover. Courtship, then, is a voyage of discovery; to see wherein and to what extent there is a harmony existing. If in all these they honestly

and inmostly agree, and find a deep and thrilling pleasure in their agreement, find their union of sentiment to give a charm to their social intercourse; if now they feel that their hearts are bound as well as their sentiments in a holy union, and that for each other they would live, it is their privilege, yes, their duty, to form a matrimonial alliance.

DESIRABLE TRAITS OF CHARACTER IN WOMAN

Marriage has in it less of beauty, but more of safety, than the single life; it hath no more ease, but less danger; it is more merry and more sad; it is fuller of sorrows and fuller of joys; it lies under more burdens, but it is supported by all the strengths of love and charity, and those burdens are delightful. Marriage is the mother of the world, and preserves kingdoms, and fills cities and churches, and heaven itself.

Earth presents no higher object of attainment. To be a wife in the truest and highest sense of the word is to be the best thing beneath the skies. To be a woman is something more than to live eighteen or twenty years; something more than to wear flounces and sport jewelry. A woman is to be estimated by the real goodness of her heart, greatness of her soul and the purity and sweetness of her character. A woman with a kindly disposition and well-balanced temper is both lovely and attractive, be her face ever so plain and her figure ever so homely; she makes the best of wives and the truest of mothers.

Women should be gentle—not weak, but gentle, and kind, and affectionate. Whatever a woman is, there should be a sweet, subduing and harmonizing influence of purity, and truth, and love, pervading and hallowing, from center to circumference, the entire circle in which she moves. If the men are savages, we want her to be their civilizer. We want her to soften their manners, and to teach them all needful lessons of order, sobriety, and meekness, and patience, and goodness.

Kindness and love is the chief glory of woman—it is, indeed, her true prerogative—her scepter and her crown. It is the sword with which she conquers and the charm with which she captivates.

CAUSES OF UNHAPPY MARRIAGES

We are now brought to the question—is it possible to make wedlock a perfect and holy state throughout its existence? We answer; it is not only possible to keep the fires of love burning to the end, but it is also possible to grow sweeter and more tender as the years advance.

The wheels of domestic life need education to make them run smoothly, quite as much as the wheels of society, and where this knowledge is used they neither rust nor wear out in the service of love. It is the little foxes that eat up the corn; the little annoyances and perplexities which, without knowledge how to handle them, render life often a burden; the little omissions and commissions prick and scourge us, and will keep us heart-sore unless we know the law.

Jealousy, too, that green-eyed monster, is ever creeping in. This is found in women more than in men. Men exhibit it to a degree, though their broad and busy lives prevent them from carrying it to the extent which mars the progress of women. All these faults and tendencies must be rooted out if both are to realize permanent happiness.

EDUCATION AN IMPORTANT FACTOR

In speaking of education we have special reference to a well disciplined mind, to an acquaintance with domestic labor and a familiar knowledge of household matters and duties. Young men, with their eyes blinded by fancy, or accomplishments, which are generally laid aside and forgotten after marriage, frequently hurry on the wedding day, but find that they have but a made-up doll, a mere actor in the great drama of life. Young men also are frequently through ignorance as poorly qualified to discharge their duties in the domestic department; and when thus disqualified they are thereby incapable of adapting themselves so agreeably, or to appreciate the sensitive nature of a wife in her various moods.

To adapt one's self successfully to a companion is as much an art as anything else, and requires as much preparation, skill and judgment, and much more presence of mind, patience and common sense, than any other conditions of life.

Parents, don't do your children the injustice of neglecting instruction in these matters, which are so intimately connected with their future success in this life. The details of that education will be found all through this book.

A maiden is always an idealist, but as a matron she is a realist; hence, if rightly taught, she will be practical, natural and sensible. She will be rid of the affectations that make her seem superficial. Matrimony will indeed make a woman of her. All the inborn judgment and good sense will come to the surface.

PREPARATIONS FOR MARRIED LIFE

It is important, to the best results of married life, that our habitual states and our transient impulses should be such as will bless and not curse our whole future life—important to have all these sources of influences wholly on the side of nobleness, virtue and beauty of character. To this end does it not behoove every one who aspires to the honor of becoming a wife to first enter into thorough training—thus helping to secure such a result as will be a source of mutual joy forever.

Helpful as is matrimony in developing a maid into a woman, yet it cannot for a moment be compared with the effect of maternity. The latter supplies a new object and a new tenderness. A woman is now endowed with a heavenly instinct. Her love has grown to pity—her eyes well with tears. She thinks of other helpless babes, and her heart opens out to all humanity.

We are told that the women of ancient Sparta exercised in gymnasiums in order to attain the highest bodily vigor, preparatory to the marriage vow. That practice, or its equivalent, may well be revived; or, better still, women from childhood should be taught to practice such physical exercises as will develop and preserve the best bodily health and vigor. It should be remembered that ordinary occupations, even of the more active kinds, exercise but a part of the muscles of the body. The whole should be brought into frequent action for the fullest vigor.

But the physical robustness and power of endurance for which the

Spartans were noted are by no means all that is desirable in our day. A universal culture is now demanded. The mental, moral, æsthetical and spiritual departments of our being require no less development and fullness of expression in us, if we would do our noblest work and discharge our full duty toward our children.

SELF-CULTURE AND DISCIPLINE

But the self-culture from which these result is not the work of a day, or even a year. In fact, the whole life of girlhood is none too long a period in which to prepare for so serious an undertaking. The earlier, therefore, the young of both sexes can be intelligently instructed in these matters, and impressed with the importance of living for those who may come after them, the better may they become fitted for the highest responsibilities of life. When young persons marry, even with the fairest prospects, they should never forget that infirmity is inseparably bound up with their very nature, and that, in bearing one another's burdens, they fulfill one of the highest duties of the union. Love in marriage cannot live nor subsist unless it be mutual; and where love cannot be, there can be left of wedlock nothing but the empty husk of an outside matrimony, as undelightful and unpleasing to God as any other kind of hypocrisy.

Some persons have imagined that because the impregnating germ contributed by the male parent is of microscopic dimensions, it matters little what the father's character or qualities may be. But this opinion is contrary to all evidence, and to the analogies of the animal and vegetable worlds. The potency of spiritual elements or forces is by no means determined by the physical dimensions of their vehicle. While the wife does much by appropriate management toward modifying and counterbalancing in manifestation the traits, good or bad, of the father, nevertheless the latter evidently furnishes a sort of substratum of character which is difficult, if not impossible, of entire eradication. Hence, in human culture, as in agriculture, good seed is of no less importance than good soil.

CHAPTER V

ADVICE TO THE UNMARRIED

EVERY one is planning to some day have a home of his or her own. The old home may be good, but a home of one's own building and adorned with one's own choosing is the dream of every young life. Thus the saying becomes true that "upon the home rests the future of the world." Its inner temple, real or ideal, is the shrine at which all enlightened mankind worships, and its altar is the Mecca of the heart. Poets have written of it—minstrels have made it the subject of song, and to all the world it has been an inspiring theme and a bright anticipation

> "A home must be 'Home,' for no words can express it—
> Unless you have known it, you never can guess it;
> 'Tis in vain to describe what it means to a heart
> Which can live out its life on the bubbles of art.
> It may be a palace, it may be a cot,
> It matters not which and it matters not what;
> 'Tis a dwelling perfumed with the incense of love,
> A beautiful type of the home that's above."

The secret of the popularity of John Howard Payne's world-famous song, "Home, Sweet Home," is not in any special excellence of meter, or even originality of thought. Rather it is the utter absence of originality that makes it universal. It merely voices in simple strain the melody of every human heart since the first home was built on earth till now.

THE HUSBAND'S AND WIFE'S PART IN THE HOME

If it be the man's part to lay the foundations and erect the building, it is woman's to beautify and enshrine music and the kindly arts within them. It is his to build and hers to beautify. It is woman who informs the home

with light and life. Her hand it is that decorates and adorns, that coils and twines the flowers and leaves, and lets in "sweetness and light" into the rooms. Her touch is that of a purifying, transforming and beautifying angel in the home, or be indeed a help-meet in every sense of the word.

When the time comes for an enlargement of your affection and your family ties, show him you are equal to it. Show him that you can be even sweeter in the role of motherhood than you have been as wife. When, as a mother, you look with love and joy upon the face of your infant, who, as yet, can neither speak nor choose his future lot, remember, as you love your own soul, that upon you, and not on circumstances, depends mainly the awful issue of what it shall be and what shall become of it. It is you, not what you call a hard, unfeeling world, that will make or mar your child. It is for you to determine whether its tongue shall speak vanity, and its right hand be a right hand of falsehood. It depends upon you whether your sons shall be as "plants grown up in their youth," and your daughters become as "corner-stones, polished after the similitude of a palace." The white unwritten page of your child's life and character is open for you to write upon. The impressions made upon it by you and the father are indelible. The first sights and sounds that are reflected upon a child's remembrance are ineffaceable.

LET NATURE TEACH YOU

Nature will assist you in this work, but she will not do it for you. She gives the material for you to work upon. You might as well expect the grass and plants to grow without moisture as the soul to grow without culture. Nature provides the limbs, but exercise develops them and gives them strength and symmetry. Yet many parents seem to think that their children will love the beautiful and do the good by mere instinct, and that the mere process of living will insure their living rightly and worthily. One might as well expect reading and writing to come by nature. But God says to you, as Pharaoh's daughter said to the nurse to whom she intrusted the infant who was to become the law-giver of a great race: "Take this child and nurse it for me, and I will pay thee thy wages," or I

will reward thee. What reward can be greater than to see one's heaven-given babe awakening more and more to a perception of light and beauty, and loving "whatsoever things are lovely" and true and noble? Do not be content with vegetation for your child; teach it to live. Habits become laws; good habits mean happiness and honor; evil habits mean misery and degradation.

MAKE YOURSELF WORTHY OF A GOOD MATE.

"The place where angels dwell—that is home," reads the old German legend, and the real interpretation of the word is not far different.

Love and intellectual sympathy is one of the conditions of fireside happiness. Let the woman's first requisite be a man who is domestic in his tastes, and the man's first object be a woman who can make his home a place of rest for him. The beautiful in heart is a million times of more avail, as securing domestic happiness, than the beautiful in person. They who marry for physical characteristics or external considerations, will fail to find happiness in their homes. As we should say to women who wish for domestic happiness, never marry a pleasure-seeker, an idle man, so we would say to men, never marry any but an intelligent woman, for after purity, quite the next best thing is that good sense which comes with intelligence. It is the best of dowries. There is no burden on earth like a foolish woman tied to a competent man, with the one exception of a false woman. No beauty, no sweetness, can compensate for the absence of clear thought and quick comprehension.

So also studying to make yourself worthy of a good husband, begin now to cultivate all those graces that make a home complete. It is not so much the arts and accomplishments as it is the character that makes home happy. I say in selecting a husband, see to it that you choose a husband with not only the ability to provide a home, but one of honor and principle; see to it that he has a heart—a great, noble, true, self-sacrificing heart—one that will love through sickness and adversity as

well as prosperity. When you have found such a one then give him all you have to give—love, confidence, good will.

ADAPTATION OF HUSBAND AND WIFE

It is asked by many doubting readers, Are there reasonable grounds for hoping that parents in general, physically diseased and morally imperfect, may by any process of self-culture, or of spiritual regeneration attain to such a state so that they shall not transmit physical diseases or moral obliquities to their offspring? Can the sexual appetite, for example, whose imperious demands are the chief obstacle to such preparatory culture as has been herein recommended, be so regulated by any means as to admit of this culture?

These are pertinent suggestions, and deserve consideration. In the past so little regard has been paid to the finer laws of adaptation, physically, mentally and spiritually, of persons entering the marriage relation—so seldom has the sacred right of the mother to choose the time and the circumstances under which she would assume the maternal function—so often, indeed, has she been compelled, or made to believe it her religious duty to accept this function at the husband's wish, even against the protest of soul and body on her part, that the common results furnish very little indication of what might be, and what will be when greater light and wisdom shall have become prevalent on these matters.

Especially should the husband refrain from ever intruding, by either demand or solicitation, against the intuitions of the wife. All such intrusions are outrages of the most flagrant character, the same in essence as positive physical violence, whether within or without the legal marriage relation. Offspring begotten when any degree of reluctance or want of preparation exists on the part of the mother, are robbed of a portion of their birthright, and to that degree unfitted for the full enjoyment of existence. That birthright includes a full and loving welcome to the world. For further suggestions see chapter on "How to Overcome Heredity."

APPROPRIATE SEASON FOR CONCEPTION

In so important an undertaking as the initiation of an immortal being doubtless it is well to have due regard to times and seasons. Though the matter is one of much delicacy, yet these pages would be incomplete without some reference to it. In the animal kingdom we observe that, as a general rule, instinct leads to the bringing forth of young in the springtime, or in early summer. That seems to be Nature's chosen and orderly time for the ushering in of new life in all departments. Probably human beings may well give heed to an intimation so broadly given.

ONLY A BABY

(Harriet Prescott Spofford, in Motherhood.)

Something to live for came to the place,
Something to die for, maybe;
Something to give even sorrow a grace—
And yet it was only a baby!

Cooing and laughter and gurgles and cries,
Dimples for tenderest kisses;
Chaos of hopes and of raptures and sighs,
Chaos of fears and of blisses.

Last year, like all years, the rose and the thorn;
This year a wilderness, maybe;
But heaven stooped under the roof on the morn
That it brought there only a baby.

CHAPTER VI

THE MARRIAGE RELATION

IN a little poem by Adelaide Proctor we find the following words:

"A loving woman finds heaven or hell
On the day she is made a bride."

This may be putting it strong, and yet, it has often occurred that when a pure, sweet girl finds she has been married to an inconsiderate, selfish man, that her whole life is worse than a blank.

It has often been said "Any fool can get married, but it takes a man of some sense to resist the temptation until he can afford such luxuries." Under the prevailing conditions of things this expression contains some grains of truth; yet it should not be so, for while the husband works for the home and the family, the wife as a help-mate should see that the expenses do not surpass the income. It requires love and common sense to enable her to adjust things successfully to the conditions of a new home.

HOW TO CHOOSE A HELP-MATE

"Marriage is a lottery," the saying goes, and there are some who believe it, and judge accordingly. It is well for such that they do no worse than draw a blank. Marriage is not necessarily a lottery, either in the initial choice or in the months and years following the marriage day. One can shut his eyes and draw, or one can open them and choose. One can choose with the outward eye alone, or with the eye of intellect and conscience.

No person until he has had experience can understand the possibilities or trials of the marriage relation even though he may have read all the best that has been written on the subject. It may be likened to reading of the glories of a far off country. One may be impressed by the reading, but can never have a realizing sense of the life until within the borders. The first glimpse is deceptive, for the scenery may or may not present

its best appearance; but daily association brings forth either a deep peace and joy, or discord and inharmony. Marriage is a law of nature, and if the laws of life are thoroughly understood and heeded by both parties happiness will never hang in the balance.

LOVE NOT FOUND IN PHYSICAL UNION

Treating the subject in its highest sense, one writer says, "Not only do the parties who enter into partnership have a very poor conception and no experience at all, of the conditions they agree to fulfill, but a great deal of useful knowledge which they ought to have is withheld from them under the mistaken idea that all which treats of sex is impure and tends to degrade humanity." Herein parents have a great responsibility laid before them. They cannot give their daughter's hand in marriage whether brilliant from a worldly standpoint or otherwise, without considering many important things. "Aside from the sexual relation, marriage is a union of the economic and social resources, and requires for its success many qualifications."

Men and women, both young and old, will seek the society of opposites in accordance with nature's law, just as plants turn to the sun. But they will find that real love is not in physical union but only the result of soul meeting soul, then mind and body will harmonize. Blessed be happy marriage. Therein the true man and true woman find life a heaven upon earth.

DOMESTIC ENJOYMENT DESTROYED

To both husband and wife we say, Preserve a strict guard over your tongues, that you never utter anything which is rude, contemptuous, or severe; and over your tempers, that you may never appear sullen or morose. Endeavor to perfect yourselves, but expect not too much from each other. If any offense arises, forgive it; and think not that a human being can be exempt from faults. The married life, though entered ever so well, and with all proper preparation, must be lived well or it will not be useful or happy. Married life will not go itself, or if it does it will not keep the track. It will turn off at every switch and fly off at every turn

or impediment. Good watch must be kept for breakers ahead. The fires must be kept up by a constant addition of the fuel of affection. It requires skill, prudence, and judgment to lead this life well, and these must be tempered with forbearance, charity, and integrity.

It is a great thing for two frail natures to live as one for life long. Two harps are not easily kept always in tune, and what shall we expect of two harps each of a thousand strings? What human will or wisdom cannot do, God can do, and His providence is uniting ever more intimately those who devoutly try to do the work of life and enjoy its goods together.

MARRIED LIFE—ITS DUTIES AND PLEASURES

Pleasures to a certain degree are as necessary to the health of a young wife, and every one else, as the sun is to the earth—to warm, to cheer, and to bring out its verdure. Pleasure, in moderation, rejuvenates, humanizes, and improves the character; it expands the good qualities of the mind; but, like the sun in its intensity, too much of it oppresses, dries up, and withers the plant. Pleasures, kept within due bounds, are good, but in excess are utterly subversive of health and happiness. A wife who lives in a whirl of pleasure and excitement is frequently sickly and nervous, and utterly unfitted for her duties and responsibilities; and the misfortune of it is, the more pleasure she takes, the more she craves.

Woman's life is made up of little pleasures, of little tasks, of little cares, and little duties, but which, when added together, make a grand total of human happiness; she is not expected to do any arduous work; her province lies in gentleness, in cheerfulness, in contentment, in housewifery, in care and management of her children, in sweetening her home. These are emphatically a heritage, her jewels, which help to make up her crown of glory.

The quiet retirement of her own home ought to be her greatest pleasure and her most precious privilege.

HOME THE KINGDOM OF WOMAN

Home is the kingdom of woman, and she should be the reigning poten-

a home—the most delightful place in the world—where affections spring up, take root and accomplish great good in the world.

A cheerful, helpful nature is one of the most valuable attributes a wife can possess. It gilds with sunshine the humblest dwelling, and often converts an indifferent and careless man into a good one. Contentment is the finest medicine in the world; it not only frequently prevents disease, but, if disease is present, it assists in curing it. Happy is the man who has a contented wife, and happy is the woman who has a considerate husband!

It scarcely need be said that the husband should take equal interest with the wife, for he is equally concerned in the object in view, namely, the production of noble and worthy offspring. Having given due attention to his own antecedent preparations, he may perform essential service in the proper development of the embryo before birth. He can accompany and assist the wife to some extent at least, in the various exercises appropriate to the successive stages of its unfolding, provide the proper facilities therefor, so far as practicable, and he can lend his sympathy and encouragement at every step, guarding her against all untoward conditions or influences, and work of self-improvement, self-discipline, and moral and spiritual perfection. And can any time in life be too early to begin this work?

BLIND PASSION

All should remember that children have rights, and among the first of these is the right to be well-born.

It hardly need be said, that a being who is to enjoy or suffer throughout its existence, and that is to bless or curse its fellows on earth through unknown generations, largely according to the characteristics enstamped on it by its parents—should be left in no avoidable degree to chance or accident. It should not be (as it so often is) the hap-hazard result of blind passion, or mere pleasure-seeking indulgence. Realizing the august responsibilities involved, both parents should act with intelligent forethought, making the best preparation possible.

CHAPTER VII

HEREDITY AND HOW IT MAY BE OVERCOME

NOTWITHSTANDING all the sad experience of common life, in suffering the ills entailed upon us by our progenitors and in entailing the same upon our offspring, there are reasons for the conviction that provision exists in the overcoming of hereditary evils, so far, at least, that, if transmitted at all, it shall be in only an ameliorated instead of an intensified form. There is help at hand to aid us in this work, if we sincerely seek and intelligently apply the agencies within our reach.

First, it seems evident, that the great forces of nature, the life-currents of the universe, tend to health rather than to disease—to physical, mental and moral soundness, rather than to their opposites.

The general tendency of nature to health is also seen in the recuperative force of life—that power present in all living organisms which tends at once to heal every wound and to cure every disease, and which accomplishes these results when not thwarted by obstacles too great to be overcome. Drugs and potions never heal; the most they do is to facilitate the operations of this inherent recuperative force.

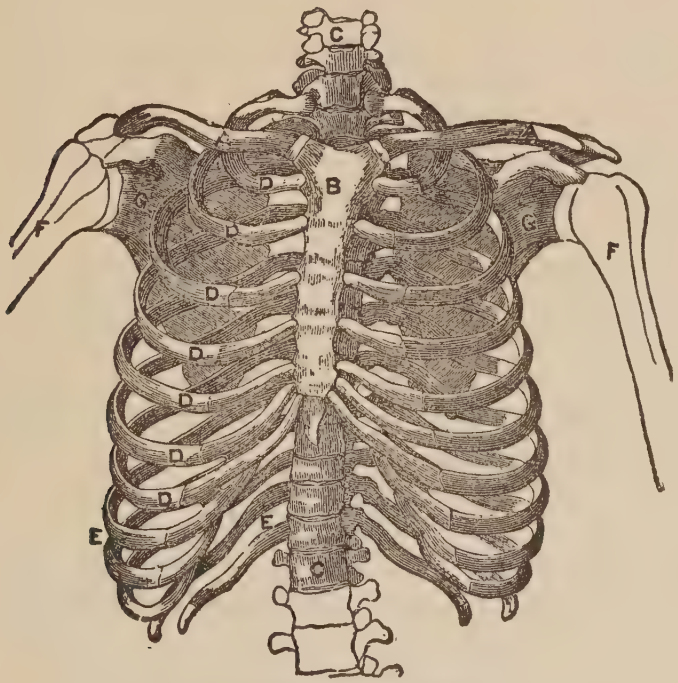
A GREATER FORCE THAN HEREDITY

There is a greater fact, a greater force than heredity, if indeed there be heredity—and that is, environment or surrounding. By surrounding we mean all those influences which bear upon and affect humanity. This influence may wreck the most beautiful lives. It does not always do so, but that is its tendency.

Admit that a family is consumptive in tendency. If we see a number of the family pass away with that disease we shall be confirmed in the thought that the disease is hereditary and that it is useless to think of overcoming it. Now, if you will take one of the children who seems most likely to develop the disease and remove him to a place where consump-

tion is not talked about, where the surroundings are cheerful and where he is not taught that he is doomed to early death, you will observe the child grows strong, living long years to a good old age.

Thought is force. Good food with cheerful conversation have the battles on their side. Children grow up to copy the traits of their house-



FORM OF THE HUMAN THORAX.

A—Clavicula (Collar-bone).
B—Sternum (Breast-bone).
C—Vertebræ (Spinal Column).
D—True Ribs.
E—False or Floating Ribs.
F—Humerus (Upper Arm-bone).
G—Scapula (Shoulder-blade).

holds and take on the thoughts of their people. If they go away from that household to another we shall see them take on the new home and put off the old one. A neighbor of mine who had no children of her own, took a girl child to raise and legally adopted her. The friends of the neighbor said: Do you know anything about the pedigree of this girl?

Do you know anything about her blood or her character? The adopted mother said: "In a sense I do not care. I should prefer, of course, that the ancestry be pure, but I expect this child to be both healthy and good." The child grown to young womanhood has realized the expectation of the training bestowed upon her.

The picture of Little Lord Fauntleroy is not overdrawn. You will remember that the boy's grandfather is a hard, unsympathetic man. He neglected his tenants, and they were afraid of him. He had no sense of the stewardship of wealth and position. You will remember how the boy came into his own life. He did not see his grandfather's hardness, his stern features, his tyranny.

The little boy had a persistent love. He expected his grandfather to be great, to be gentle, to be just, to be merciful, to be kind. And how did it turn out? Why, the old tyrant became the gentle friend of all because love thought he was and treated him so. You may say that is only a story. Yes, that is so, but you read it, and the world reads it, because it is true. Expectation, working toward an end, will overcome almost everything, if not everything.

THOUGHT IS FORCE

In like manner, if we shall say a child is bad and expect bad things, we shall be apt to find bad things. But if we shall continually expect good, work for good in its life, we shall be pretty sure to realize our efforts and expectations.

If a mother will sit by the bed of a child when it is asleep and will talk to it in a low, gentle tone, the child will hear and yet not waken. If the child is backward mentally, morally, physically, tell that child you expect it to stand well in its class, to be pure among associates, to be strong in its body. Suggestion will slowly but surely carry the life in the indicated directions. You may also cure its jealousies, and its weaknesses, in the same manner.

If you go into a school room, and hear many coughing, you will find what mind means when you give a strong cheery word to the children

The coughing ceases. The assertiveness of mind must ever be put into the contest of life. Mind will make the blood flow; it can slow or accelerate the pulse. Think what this means in the plastic life of children. A word will shut it up in a dungeon or set it free in the open fields.

Influence, surroundings or environment, overcome what is implied by the term heredity. "Think no bad thought, speak no harsh word."

HEALTH IS NATURAL—ILL HEALTH, UNNATURAL

It has been demonstrated, in the scientific propagation of animals, that abnormal characteristics are far less persistent in transmission than are normal ones. The tendency of nature's forces is to maintain the normal type. The same law doubtless obtains in the human species. The law that "like begets like" is thus subject to a modifying principle, and one that is full of hope for suffering humanity. Not alone do the evils of our nature tend to reproduce themselves, but by virtue of this natural reversion to what is normal, healthful, improving, the goods and excellencies have a still better chance of survival—provided adverse influences can be kept in abeyance, and that the salutary life-currents of the universe shall be unobstructed.

How, then, may this be done? The answer is: First, by right living. Not only must we think right but we must cease those unphysiological habits of diet and regimen in general. To be more specific, we must cease to ruin our stomachs and destroy our digestive powers by the use of indigestible hot bread, pastry, greasy food, complicated and highly spiced dishes, and all the many abominations of modern un-hygienic cookery. We must abstain from swine's flesh, that prolific generator of scrofula and trichinae, and from the flesh of all animals slaughtered in diseased conditions. We must also abjure those common narcotic and alcoholic beverages, which, under the guise of stimulating, only weaken and lower the tone of the nervous system, creating a demand for more and more of the same deceptive stimuli, until the unfortunate victim comes to imagine them "necessaries of life." We must learn to content ourselves with the simple, nutritious and healthful foods, chiefly from the vegetable kingdom (including, of course, the cereals, fruits and nuts), which experi-

ence shows most conducive to bodily soundness, mental vigor and moral purity; we must be much in the open air; exercise duly all parts of the muscular system; dress rationally instead of fashionably; bathe often and thoroughly, in order to rid the system of effete matters which become poisonous by retention in the pores of the skin; and, in short, must practice all those rules of hygiene which sanitary science has found requisite to the highest bodily health. So much, at least, must commend itself to the good sense of every reader.

It is plain to be seen that one who carefully regards these conditions of health stands in a far different relation to the life-giving, health-imparting forces of the universe from that occupied by one who, through a disregard of these conditions, is constantly thwarting the recuperative tendencies of nature, and is nourishing and adding to the

IMPROVEMENT FOR THE RACE

If the foregoing suggestions are well founded, then there is hope for all, based in the very constitution of things. Improvement for the individual and for the race is possible, and that without limit. The grand energies of the universe are in its favor. In our ills and weaknesses, our conscious basenesses and evil proclivities, inherited though they may have been from a long line of ancestry, we need not lie prone and helpless, with no alternative but either to transmit these hateful qualities to our offspring, or to refrain from the supreme joy of reproducing ourselves.

Should such preparations for parentage as have been suggested in the chapter on Pre-Natal Culture be attained, it is probable that results of a very desirable character would be realized.

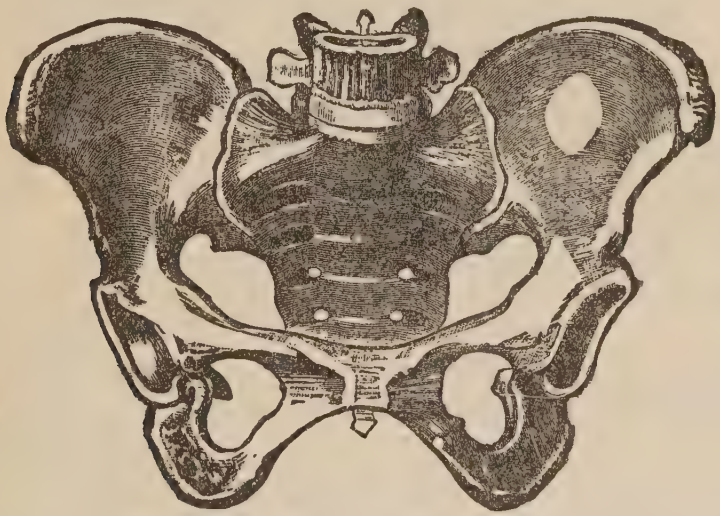
PART III

THE ORGANS OF GENERATION

CHAPTER VIII

THE HUMAN PELVIS

AS THE genital organs of the male effect fewer functions than those of the female, we will here mainly describe the latter. The female organs of generation are divided into external and internal. The external organs are included under the general name of vulva. They



THE FEMALE PELVIS.

So called from its resemblance to a basin. It is a bony ring interposed between the lower end of the spine, which it supports, and the lower extremities upon which it rests. The pelvis is divided, for convenience of explanation, into the false and true pelvis.

consist in front of the mons Veneris, a fatty cushion covered in the female at the age of puberty with hairs, and extending back from this on each side, two lips or folds of the skin—the outer ones which are partially cov-

ered with hairs, called the labia majora, or large lips, and the inner ones which are covered by a pink colored mucous membrane, called the labia minora, or small lips.

Near where the labia minora meet in front is a little fold of membrane called the clitoris. This is usually about one fourth of an inch long, but it sometimes becomes greatly enlarged so as to be an inch or more in length. The clitoris is the seat of special sensation, and becomes somewhat enlarged and hardened when the passions are excited. About one inch back from the clitoris is the opening of the urethra, or outlet of the bladder. Immediately back of this is the opening of the vagina which is the entrance to the internal generative organs.

STRUCTURE OF THE EXTERNAL ORGANS OF GENERATION (FRONT VIEW).

a. Bulbus vestibuli. *b*. Sphincter vaginæ muscle. *e, e*. Venous plexus, or pars intermediate. *g*. Connecting veins. *h*. Dorsal vein of the clitoris. *l*. The obturator vein.

THE VAGINA

The vagina is the passage which leads from the vulva, or external opening, to the womb. It is from three to five inches in length and passes upward and backward in a somewhat curved direction, and, owing to this curving, it is about an inch longer on the posterior side than on the anterior. Its walls are thick, and capable of dilating or contracting to a considerable extent. It is lined with a mucous membrane throughout, like the uterus, and in virgins is marked with a number of folds, which gradually disappear after connection, and especially after delivery. The outlet of the vagina is kept closed by means of a circular, or constrictor, muscle

This muscle also tends to draw the walls of the vagina together, making them more firm, thus enabling it in a great measure to support the womb above.

THE UTERUS

The uterus, or womb, was formerly thought to be the most essential of the generative organs, but it is now known to be but the receptacle into

THE TRUE PELVIS.

The lines *a* and *b* show the diameters of the true pelvis. It is smaller than the *false pelvis*, but its walls are more perfect. The pelvis is replete with interest, since through it must pass the fœtus or unborn child.

which the ripe egg is discharged from the Fallopian tubes. If conception takes place it remains and develops into a new being, otherwise, after a short stay, it passes off.

The form of the womb is nearly that of a pear, the larger end being at the top. The length is about two inches and a half, and its breadth at the top about one and a half inches, while at the lower end it is something less than an inch. Its thickness is also about one inch. It is not round, but flattened, and is slightly curved, or bent, the curved part being toward the back bone, the lower part, or neck, projects into the vagina, the walls of which are attached to the exterior some distance above. The walls being very thick the cavity is necessarily very small, and is different in

form to the exterior. In the upper part, the cavity is shaped like a triangle, the Fallopian tubes entering at the two upper angles; in the lower part it is continued downward, like a tube which swells out a little more than half way down, and at its termination opens by what is called the os uteri, or mouth of the womb, into the vagina.

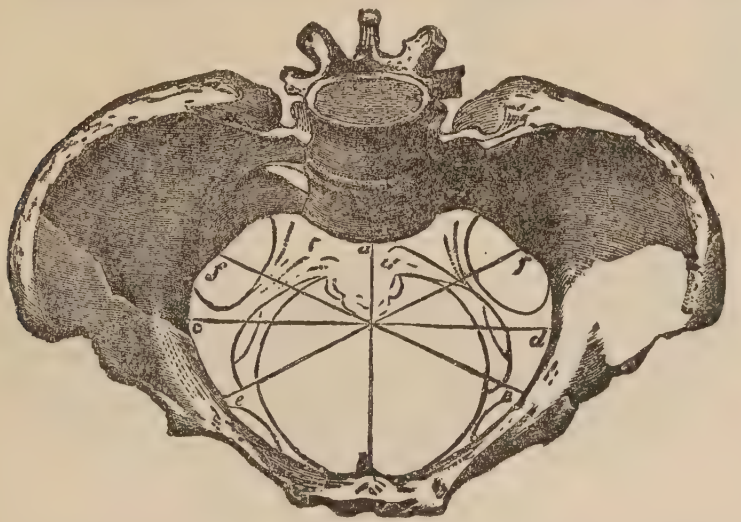
The womb is kept in position by two round cords, or ligaments, attached, one on either side, to the womb. These are about five inches

THE UTERUS (WOMB).

This cut shows the uterus and its appendages; ovaries in the broad ligaments; oviducts and fimbriated extremities; round ligaments; vagina laid open, showing the mouth of the womb and the folds in the mucous membrane.

long, and are firmly attached by their other ends to the pubic, or front bones. Without these the womb would be liable to displacements, but as they act with equal force and in opposite directions they necessarily hold the womb in the center. Besides the round ligaments there are also the broad ligaments, which consist of two sheets of strong membrane, one on either side, which extend from the top of the womb nearly the whole

vagina down, inclosing the round ligaments, tubes, and ovarian ligaments in their substance. They grow fast to the pelvis and assist in maintaining the uterus, ovaries and tubes in their proper situation. There are also two ligaments that connect the womb to the bladder in front, called the anterior ligaments, and two others which connect it with the rectum behind, called the posterior ligaments. All these, however, do but little toward actually supporting the womb, which is really kept in its place more by the firmness and density of its own substance, and that of the



THE FALSE PELVIS.

The lines *a b*, *c d*, and *e f*, show the relative diameters of the false or upper pelvis. This broad shallow cavity is fitted to support the intestines and to transmit a part of their weight to the anterior wall of the abdomen.

vagina below, and by tension of the muscles in the perineum than by anything else. When these parts become weak from debility or disease the ligaments stretch, the perineal muscles relax, and the walls of the womb and vagina soften till all fall down together, causing prolapsus uteri, or falling of the womb.

The substance of the uterus is muscular, and is capable, in its contractions, of exerting great force. The increase in size which it under-

goes, at the different periods of gestation, is most extraordinary, and its after contraction to its original dimensions is still more so.

Arteries, veins and nerves are plentifully supplied to the womb, so that it is abundantly nutrified, and highly sensitive. Indeed there is no other organ in the body, except the ovaries, that has such extensive sympathies, or that is capable of such rapid growth. The womb, however, is altogether dependent upon the ovaries both for its development and its functional ability. If there are no ovaries the womb will be found merely rudimentary, and if the ovarian action ceases, those of the womb cease also.

THE OVARIES

The ovaries are two small, almond-shaped bodies, placed one on each side of the womb. They are enveloped in the broad ligaments and are

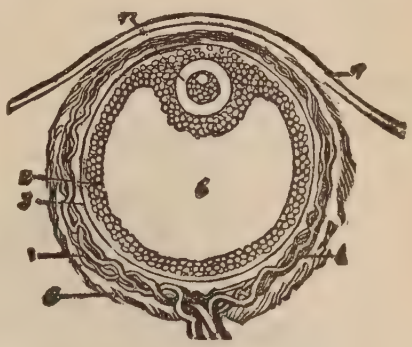
UTERINE AND UTERO-OVARIAN VEINS.

attached by a strong cord to the womb, and also to the fimbriated edges of the Fallopian tubes. Their color is pale red, and they are covered over with little protuberances and indentations.

In early life they are quite small, but about the age of puberty they begin to enlarge, and exert a powerful influence over the system generally. In fact, they are the most important of the generative organs, and the part they play in the grand process of reproduction is to produce the egg, or ova, from which all living beings originate.

Each ovary contains, embedded in its meshes, about twenty or thirty little vesicles, or cells, about the size of a small pea, called the Graafian fol-

ficles. These are filled with a whitish fluid, in the midst of which is seen an egg, or ovum, about the size of the point of a pin, or barely discernible with the naked eye. Usually, there are from twenty to thirty of these follicles visible at once, but there are many others, and which are only seen as they develop The actual number it is impossible to know, but in all probability, there are many more than are usually suspected, and there is good reason for supposing that none is formed in adult life, but that the germs of all are contained in the ovaries from the very first formation of these organs.



GRAAFIAN FOLLICLES.

1, ovum; 2, 3, membranes of the follicle; 4, its vessels; 6, cavity containing fluid in which is suspended the ovum; 7, external covering of the ovary.

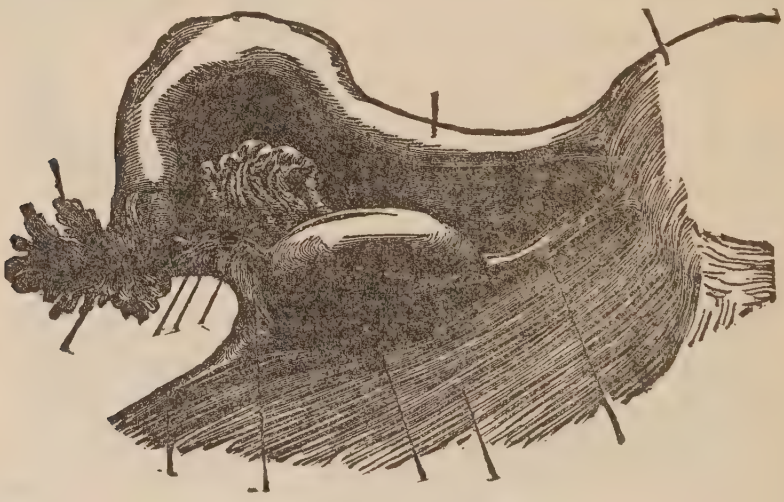
Neither the follicles nor the included eggs are all equally matured when we see them, but some are more perfect than the others, and one usually much more so than all the rest. In fact, they ripen, or develop in succession, one after another, commencing at the age of puberty, and continuing to do so until the change of life, when all have been developed. This development of the egg takes place independently of sexual excitement or connection, and occurs each twenty-eight days in all healthy women, both married and single, after the age of puberty.

WHEN CONCEPTION TAKES PLACE

From this it will be seen that, in all normal cases, conception can take place only at the time, or soon after the expulsion of the mature ova from the ovaries, or, in other words, if connection does not occur until after the ova has left the body, there can be no impregnation until the return of another period.

The manner in which the egg is expelled is very curious, and when understood, explains many of the attendant phenomena. If the ovary is

examined about three weeks before one of the periods, none of the Graafian follicles or their contained ova, appears very different from the others, but about a week later one of them begins to enlarge and continues to increase in size, at the same time coming nearer the surface of the ovary. Finally, the follicle as well as the surrounding membrane of the ovary bursts and the ova escapes through the opening. This is called ovulation. As there are two of the ovaries it is probable that they mature ova alternately, one, one month, and the other the next, though in case one ovary is disabled or destroyed, the other will act regularly and perform the functions of both.

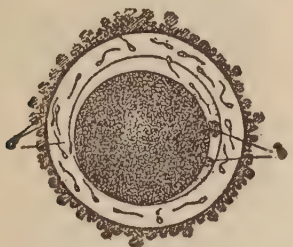


OVARY AND FALLOPIAN TUBE.

THE FALLOPIAN TUBES

The Fallopian tubes are two minute tubes, one on each side, extending outward from the upper part of the cavity of the womb. Each tube is about four inches in length, its canal is exceedingly minute, and at the junction with the uterus will barely admit a fine bristle; it continues narrow along the inner half of the tube, then widens into a trumpet-shaped extremity, the margins of which are surrounded by a series of fringe-like

processes, termed fimbriæ. One of these processes is connected with the outer end of the ovary. As the Graafian follicle bursts, this fimbriated or hand-like extremity of the Fallopian tube, guided by some unexplainable impulse, reaches over and grasps the ovary, thus securing the liberated egg



THE OVUM ENTERING THE FALLOPIAN TUBE.

THE OVUM IN THE FALLOPIAN TUBE.

and conveying it to the opening of the tube, which by contracting behind it and by successive contractions forces it into the cavity of the womb, where, as before stated, it is either impregnated and develops into a fœtus or passes into the vagina and thus out of the body.

CONCEPTION

Conception, as before stated, usually takes place soon after the ova leaves the ovary. The ova requires about two days to pass through the Fallopian tube, thus reaching the womb about the time that the menstrual flow ceases.

OVUM WELL ADVANCED IN THE FALLOPIAN TUBE.

THE OVUM AT THE LOWER END OF FALLOPIAN TUBE.

The period in which the ova remains in the womb varies in different individuals; in some it is retained for several days (usually about eight), while in others it passes off almost immediately. Those women who are

close observers can often tell to a certainty when this occurs, as it is usually attended with nervousness and as a minute substance like the white of an egg with a fleck of blood in it may often be seen upon the clothing.

OVUM AND EMBRYO.

The term embryo is applied to the product of conception up to the third month, after which time the term fœtus should be substituted.

Impregnation takes place by the union of the male sperm with the female ova. Usually this takes place in the womb, but there is no reason why the male germ, once within the cavity of the uterus, should not pass into the Fallopian tubes and there meet the unimpregnated ova. Usually but one ova is discharged from the ovaries at a time, but occasionally both ovaries will discharge an egg into the womb, or one follicle may contain two eggs. In either case both may be impregnated, and thus produce twins. In those rare cases where three or even four are produced at one birth, it is probable that, for some unexplainable reason, a like number of eggs have been produced by the ovaries.

RIPE OVUM.

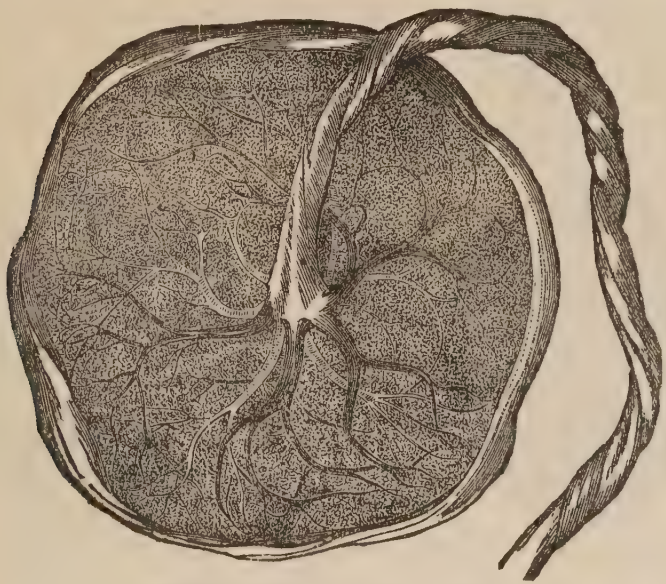
DEVELOPMENT OF THE EMBRYO

The ovum in passing through the Fallopian tube increases in size from one one-hundred and twenty-fifth of an inch to one-fiftieth or one twenty-fifth of an inch by absorption or yolk nutrition. As the egg is small it can furnish nutriment for but a short time. About six days after conception takes place, a membrane forms around the ovum called the chorion. This serves to anchor the ovum to the walls to the uterus.

From the chorion minute hollow tubes ramify in all directions, and coming in contact with the walls of the uterus draw nourishment from the

mucous membranes which line that organ. This nourishment is transmitted to the embryo by means of an organ connecting it with the chorion, and called the allantois. The allantois in time develops into the umbilical cord, the villi of the chorion diminish, and finally are obliterated, save at the junction of the allantois with the chorion, where they rapidly enlarge, and this portion at the end of the second month develops into the placenta, from which nutriment is furnished to the fœtus.

The placenta is a soft, spongy mass, nearly circular in form, measuring



UTERINE SURFACE OF THE PLACENTA.

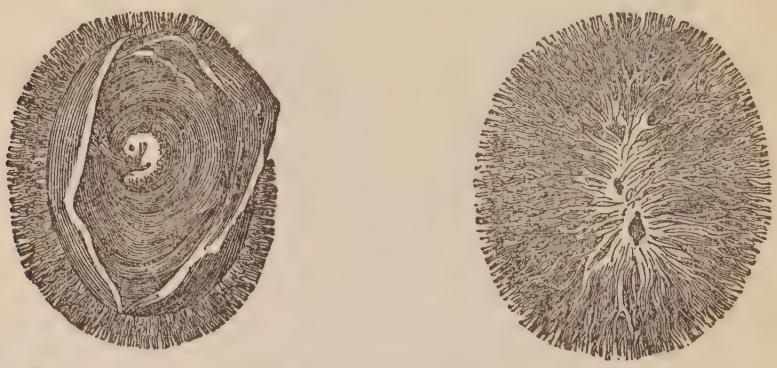
about seven and one-half inches in diameter and one inch in thickness at the insertion of the umbilical cord. Its weight is about one pound. The fœtal surface is smooth, while the uterine surface has a roughened, spongy feel.

The uterine surface of the placenta coheres with the uterus and is connected by the umbilical cord with the fœtus. During intra-uterine life the placenta performs offices similar to those of the lungs and intestines after birth. It absorbs nourishment, renovates the blood, and discharges

by exhalation the excrementitious matters originating in the process of fœtal nutrition. The umbilical cord consists of a sheath inclosing a gelatinous mass surrounding two umbilical arteries and one vein. Through the agencies of the umbilical cord, as before stated, the fœtus is nourished and the excesses discharged.

THE BREASTS

The breasts are accessory to the generative organs, and by many anatomists are classed among them. Their development and functions are simultaneous, and the sympathy between them is so marked that one can hardly be affected without the other. They are hemispherical in shape, glandular in tissue and the left one is usually slightly larger than the other.



APPEARANCE OF THE HUMAN EMBRYO AND OVUM AT THE TWENTY-FIRST DAY.

On the outer surface, and just below the center, is a small conical prominence, called the nipple, which is of darker color than the rest of the breast, and is surrounded by a circle called the areola, having a deeper tint than the surrounding skin. In blondes the color of the areola is of a rosy hue, in brunettes it is much darker. This color is of importance inasmuch as it is affected by pregnancy, providing a reliable sign by which the physician may determine whether a woman is in a state of pregnancy or not.

The growth of the embryo after fecundation is very rapid. On the

tenth day it has the appearance of a semi-transparent, greyish flake. On the twelfth day it is nearly the size of a pea, filled with fluid, in the middle of which is an opaque spot, presenting the first appearance of an embryo, which may be clearly seen as an oblong or curved body and is plainly visible to the naked eye on the fourteenth day. The twenty-first day the embryo resembles an ant or a lettuce seed; its length is from four to five lines and its weight from three to four grains. Many of its parts now begin to show themselves, especially the cartilaginous beginnings of the spinal column, the heart, etc.

THE OVUM AT THE EIGHTH WEEK.

The thirtieth day the embryo is as large as a horse fly, and resembles a worm bent together. There are yet no limbs, and the head is larger than the body. When stretched out it is nearly half an inch long. Toward the fifth week the head increases greatly in proportion to the remainder of the body, and the rudimentary eyes are indicated by two black spots turned toward the sides, and the heart exhibits its external form, bearing a close resemblance to that in the adult.

THE OVUM IN THE SECOND MONTH.

In the seventh week bone begins to form in the lower jaw and clavicle. Narrow streaks on each side of the vertebral column show the beginning of the ribs. The heart is perfecting its form, the brain enlarging and the eyes and ears growing more perfect and the limbs sprouting from the body. The lungs are mere sacs, about one line in length and the trachea is a delicate thread, but the liver is very large. The arms are still imperforate. In the seventh week are formed the renal capsules and kid-

neys. At two months the forearm and hand can be distinguished, but not the arm; the hand is larger than the forearm, but it is not supplied with fingers. The distinction of sex is yet difficult. The eyes are prominent, but the lids do not cover the eyeballs. The nose forms an obtuse eminence. The nostrils are rounded and separated. The mouth is gaping

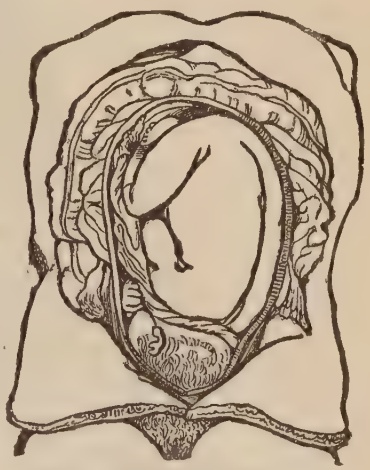
THE OVUM AT THE FIFTH MONTH.

and the epidermis can be distinguished from the true skin. The embryo is from one and a half to two inches long and weighs from three to five drams, the head forming more than one-third of the whole.

At the end of three months the eyelids are distinct but shut; the lips are drawn together; the forehead and nose are clearly traceable, and the

organs of generation prominent. The heart beats with force, and larger vessels carry red blood; the fingers and toes are well defined, and muscles begin to be developed.

At the fourth month the embryo takes the name of fœtus. The body is six to eight inches in length and weighs from seven to eight ounces. The skin has a rosy color, and the muscles now produce a sensible motion. A fœtus born at this time might live several hours.



FŒTUS AND SURROUNDINGS AT SEVENTH MONTH.

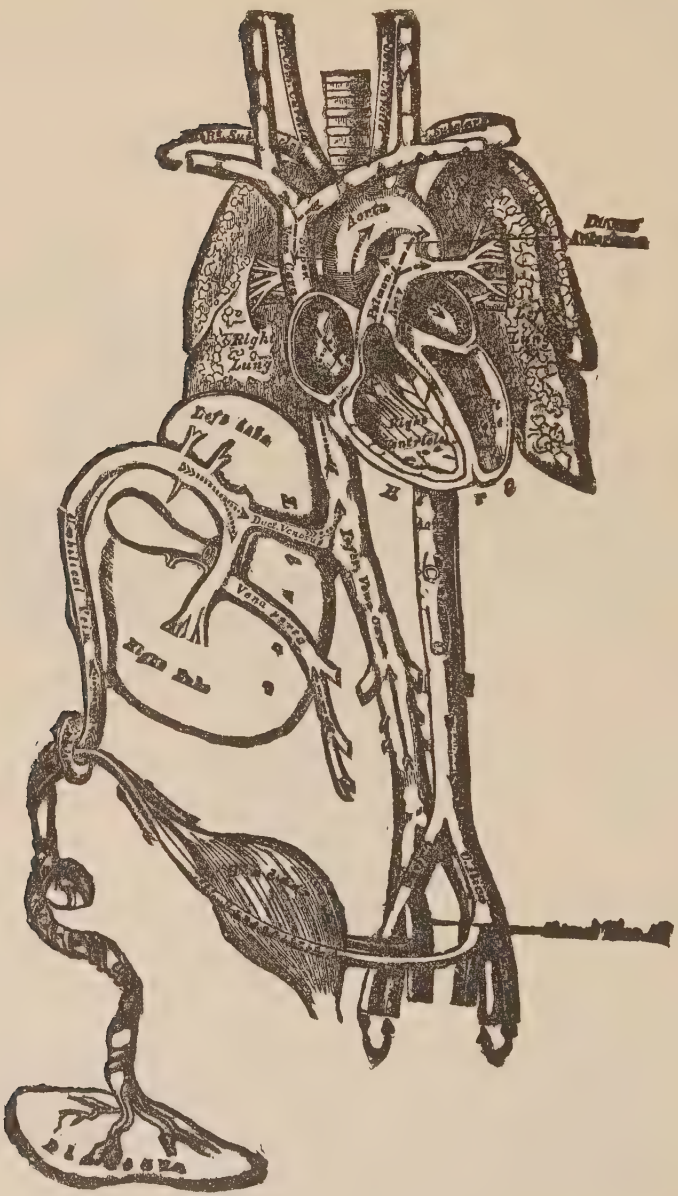
At five months the length of the body is from eight to ten inches, and its weight is from eight to eleven ounces.

At six months the length is twelve and a half inches; weight one pound. The hair appears upon the head, the eyes closed, the eyelids somewhat thicker, and their margins as well as the eyebrows are studded with very delicate hairs.

At seven months, every part has increased in volume and perfection; the bony system is nearly complete; length twelve to fourteen inches, weight two and a half to three pounds. If born at this period the fœtus is able to breathe, cry and nurse, and may live if properly cared for.

At eight months, the fœtus seems to grow rather in thickness than in length; it is only sixteen to eighteen inches long and yet weighs from four to five pounds. The skin is very red, and covered with down and a considerable quantity of sebaceous matter. The lower jaw, which at first was very short, is now as long as the upper one.

Finally, at term, the fœtus is about nineteen to twenty-three inches long, and weighs from six to nine pounds. The red blood circulates in the capillaries, and the skin performs the functions of perspiration; the nails are fully developed.



FIGAN OF FŒTAL CIRCULATION.

FŒTAL CIRCULATION

The Plan of Fœtal Circulation.—As the lungs of the fœtus are dormant the fœtal circulation is a very interesting phenomenon. The blood, passing from the right ventricle into the pulmonary artery, instead of entering the lungs, passes, almost entirely, through the ductus arteriosus into the descending aorta. From here the larger part is conveyed through the umbilical arteries to the placenta, where the interchanges with the maternal blood take place.

After being thus renovated and recharged with oxygen, it collects within the umbilical vein and passes back to the fœtal liver. Here a part of it circulates through this organ, while the rest passes direct through the ductus venosus into the inferior vena cava, where it again meets the blood brought from the liver by the hepatic vein, and the two mixing with that returning from the lower extremities and viscera of the abdomen enter the right auricle, and by the Eustachian valve pass into the left auricle, where it becomes mixed with a small quantity of blood returning from the lungs by the pulmonary veins.

From the left auricle it passes into the left ventricle, from here into the aorta, from whence it is distributed almost entirely to the upper extremities. Descending by the superior vena cava it enters the right auricle, and from here into the right ventricle, and thus completes the circuit.

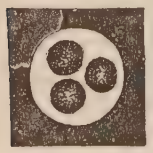
CHAPTER IX

MENSTRUATION

THERE is probably no function of woman which is so little understood by woman herself, as menstruation. She can tell you that she has had this discharge about every twenty-eight days, how long it lasts, and predict exactly when it will again appear; but why it appears most women are unable to state. This cannot be wondered at when we consider the short time which has elapsed since this function was clearly understood even by medical men. From the earliest ages to the present time there have been numberless theories advanced, but each, one after the other, has fallen to the ground by its own dead weight, until at last the undoubtedly correct theory has been reached.

SECTION OF OVARY.

In accordance with the universal law of reproduction every living thing comes from an egg or germ. This can be shown as well in the vegetable as the animal kingdom. The sturdy oak from the acorn, the ear of corn from the grain planted by the farmer, the robin, and the elephant all springing from germs, go to prove the truthfulness of this law. Every seed, every egg contains a germ, which, when brought under proper influences, will produce of its own kind.



APPEARANCE OF THE SEMINAL GRANULES.

THE SEAT OF LIFE

Thus far all is plain enough, but where do these germs originate? It has been ascertained that each animal, as well as each plant, is provided with an organ for the production and throwing off of these cells or germs.

In woman this organ is the ovary, the sole physiological function or duty of which is to mature and deposit its ova or eggs every twenty-eighth day, from the age of fifteen to that of forty-five. This function is suspended only during pregnancy and nursing, but sometimes not even then. During the maturation or ripening, and discharging of the ovum into the canal or tube which conveys it into the womb, the generative organs become very much congested, looking almost as if inflamed. This congestion at last reaches such a height, that it overflows, as it were, and produces a discharge of bloody fluid from the genitalia or birthplace. As soon as the flow commences the heat and aching in the region of the ovaries, and the weight and dragging sensation diminish and gradually disappear. Thus it will be seen that menstruation consists merely in the ripening and discharge of an ovum or egg, which, when not impregnated, is washed away by the menstrual fluid or blood, poured out from the vessels on the inner surface of the womb.

SECTION OF WOMB.

The marvelous regularity of menstruation has always excited great wonder, but why should it? When we look around, we see that both animal and vegetable life have stated and regular times at which germ production takes place. Fruits and vegetables ripen, and animals produce their young at certain periods. It is a law of nature, and why should not woman obey it, in her monthly term?

Now, since it has been shown that menstruation consists in the ripening, and regular deposit of an egg—the flow being but the outward visible sign of such an act—it is possible that a woman may menstruate regularly without having any show. To prove this, there are many cases on record where a woman has married, and become pregnant without having had the least show, which would be impossible if she did not menstruate.

A woman in perfect health should feel no necessity for deviating from the ordinary duties or occupations and no special care need be taken at

this time. Under existing conditions, however, such cases are extremely rare and by far the exception rather than the rule.

As has been before remarked, menstruation commences at about the age of fourteen or fifteen in this country. In warmer climates it appears earlier, and in colder ones, later. Menstruation, menses, courses, monthly periods, and "being unwell," are some of the terms by which this function is designated. Those who live luxuriously, and whose physical training has been such as to make their nervous systems more susceptible, menstruate at a much earlier period than those who have been accustomed to coarse food and laborious employment.

The appearance of the menses before the fourteenth year is regarded as unfortunate, indicating a premature development of the organs; while their postponement until after the sixteenth year is generally an evidence of weakness, or of some disorder of the generative apparatus. If, however, the person has good health, and all her other functions are regular; if her spirits are not clouded, nor her mind dull and weak, it should not be considered necessary to interfere with nature, for irreparable injury may be done.

SYMPTOMS OF MENSTRUATION

The first appearance of the menses is generally preceded by the following symptoms: Headache, heaviness, languor, pains in the back, loins, and down the thighs, and an indisposition to exertion. There is a peculiarly dark tint of the countenance, particularly under the eyes, and occasionally uneasiness and a sense of constriction in the throat. The perspiration has often a faint or sickly odor, and the smell of the breath is peculiar. The breasts are enlarged and tender. The appetite is capricious, and digestion is impaired. These symptoms continue one, two or three days, and subside as the menses appear. The menses continue three, five or seven days, according to the peculiar constitution of the woman. The quantity discharged varies in different individuals. Some are obliged to make but one change during the period, while others change from ten to fifteen times.

At about the age of forty-five the final cessation of menstruation takes

place. Sometimes the symptoms are mistaken for those of pregnancy—such as sickness at the stomach, capricious appetite, swelling and pain in the breasts. The change is generally gradual. The discharge may return every two or three weeks, then cease for two or more months, return again for several months as regular as ever, and finally disappear altogether. The subject is treated more thoroughly under the title "Change of Life."

It is during the menstrual period that the system, especially of young persons, is more susceptible to both mental and physical influences. The emotions of joy, grief, love and sympathy are more easily excited than at other times. Women are liable to be very irritable and exacting. For this reason they should be treated with more than usual indulgence and sympathy.

Very much depends upon the regular and healthy action of the discharge, for to it woman owes much of her beauty and perfection. Great care should therefore be used to guard against any influences that may tend to derange the menses. Sudden suppression is always dangerous. Cold baths, foot baths, wetting the feet by the wearing of thin shoes, are very injurious during this period. A young woman anxious to attend a party or ball during this period sometimes takes a hip bath to arrest the discharge, but what a train of horrors follows such an insane act, and still there are many foolish enough to do this. During the menstrual period no treatment is necessary, unless some of the various derangements of menstruation afflict one, and then the management of these will be found under their proper heads under the chapter entitled "Diseases of Women and Children and Their Cure."

MENSTRUAL IRREGULARITIES

When the menses do not appear at the time when they may naturally be expected, we call it delayed or obstructed menstruation. It is, however, of great importance to know whether a girl is sufficiently developed to make it necessary for the menses to appear, although she may have reached the proper age. As long as the girl has not increased physically, if she has not become wider across the hips, if her breasts have not become

enlarged, and if she experience none of the changes incident to this period, an effort to force nature is positively injurious. In this case a general treatment will be called for. The girl should be taken from school, from all debilitating influences, such as bad air and poor diet; from the exciting and exhausting scenes of city life, and sent to the country, to the mountains, or to the seashore, to breathe pure air, rich in oxygen; take daily exercise, and have sunshine and nourishing food. A season of this kind has brought many an enfeebled girl to a state of health and vigor which would before have seemed impossible. If, however, she is fully developed, and yet suffers from time to time from congestions of the head, breast, or abdomen, it will be necessary to interfere. The following are the symptoms which will generally be found present in these cases: Headache, weight, fullness, and throbbing in the center of the cranium, and in the back of the head; pains in the back and loins; cold feet and hands, becoming sometimes very hot; skin harsh and dry; slow pulse and not unfrequently attended with epilepsy.

Treatment.—It is wise, a few days before the period, to take hot foot baths at night and dress the feet warmly during the day.

The following remedy will correct the irregularity:

Tinct. of Belladonna.....3 drops.
Tinct. of Hellonine .....6 drops.
Tinct. of Nux Vomica.....2 drops.
Put the above in full glass of water.
Dose, two teaspoonfuls every hour.

SUPPRESSION OF THE MENSES

By suppression is meant a disappearance of the menses after they have become established, and may be either acute or chronic.

Among the causes of suppression may be mentioned the following: Sudden exposure to cold and humid air when the body is overheated, cold baths or ice cold drinks, loss of blood, a wound, a blow, a fall, a burn, an excessive pain, a great mental shock, powerful drugs, an irritated stomach, poor nourishment, overwork, late hours, the use of articles of a stimulating nature; moral affections, such as sadness, grief, disappointment, etc. It

may also be caused by an imperforated hymen, in which case a surgical operation will be necessary.

Symptoms.—Headache; fever, hot skin, quick pulse, thirst; cold hands and feet; weight, fullness and throbbing in the center and back part of the head; pains in back and loins.

When the suppression is chronic, the whole system responds to the unnatural condition, the appetite is lost, or replaced by a desire to eat strange things; the irritable stomach rejects food, or is troubled by nausea; the heart, oppressed, is subject to palpitations; the head is full and heavy, and sometimes excruciatingly painful; the ears ring with strange sounds; the intestines in their turn are irritated, producing diarrhœa or dysentery; the bladder, the next neighbor to the womb, shares in the general derangement, causing frequent and difficult urinations. This condition finally induces general lassitude, sadness or malaise. The face becomes pale and puffed, the flesh flabby, the movements languid; the mind yields easily to moral influences, and becomes morose or melancholy.

General Treatment.—When the suppression is caused by some disease in the system, that disease must be cured before the menses will return. For sudden suppression, use the warm sitz bath or foot bath, or both. On awaking in the morning drop the gown and with a coarse towel or flesh brush produce a vigorous friction all over the body by upward movements of the brush. Then dress quickly.

It should be remembered that the tendency of menstruation is to reappear, and that in due time nature makes the effort to re-establish it; it is then that the means to assist it should be employed.

If the discharge ceases take the following and continue until the flow is established whether within three days or one month:

Tincture of Pulsatilla.....6 drops.
Tinct. of Veratrum Veride.....6 drops.
Tinct. of Hellonine.....6 drops.
In glass of water. Dose, two teaspoonfuls every hour.

CHLOROSIS, OR GREEN SICKNESS

This disease generally occurs in young unmarried women who are weak and delicate. It manifests itself about the age of puberty, and is accompanied by feeble appetite and digestion. There is no menstrual discharge, or else it is very slight.

Causes.—Such as derange the vital functions, as innutritious food, residence in damp and ill-ventilated apartments. Those who drink largely of tea, coffee, diluted acids, bad wines, and indulge in tight lacing, are predisposed to this disease. Among the exciting causes may be mentioned disturbing emotions, unrequited love, home-sickness, depression of spirits etc.

Symptoms.—The symptoms characterizing this disease do not manifest themselves all at once, but gradually, insidiously, and almost insensibly come upon the patient. One usually first complains of general lassitude, and an aversion to physical or mental labor of any kind. There is a peculiar color of the skin, not excessively white, but a paleness, mixed with yellow and greenish tinges. The lips at times are almost white, the eyelids livid and swollen. The skin feels cold to the touch. The gums become pale, and the tongue is generally coated white, and there is a pasty taste in the mouth in the morning. The breath is offensive. The subject appears weak, and tires very soon after slight exertion. She breathes hurriedly, not from any disease of the lungs, but because she has not sufficient strength to expand the chest to its full capacity. The sleep is disturbed and unrefreshing. The bowels are constipated, and sometimes there is nausea and vomiting. The pulse is small and frequent. She is sad, subject to fits of weeping, and prefers to be alone. The appetite is diminished, and dyspeptic symptoms, as heartburn, sour stomach, pain in the stomach with nausea, show themselves.

As the affection proceeds, the lower extremities become swollen, hectic cough sets in, sometimes attended with spitting of clots of blood. The abdomen becomes tense and swollen, and so much so sometimes, that the patient may be accused of being pregnant. The menses, if they have

appeared, gradually become scanty, and are attended with great pain; they continue but a short time, are pale and watery, and finally cease altogether. There is sometimes severe pain through the left breast, or the chest. In some cases nervous symptoms, as hysterical fits, spasms, etc., manifest themselves. Chlorosis may be mistaken for disease of the heart, or consumption. I have given here a full description of the disease, so that it may be recognized from the start. All of the above symptoms are not present in every case, but in a majority of cases.

Treatment.—If we take into consideration the fact that the cause of the disease is impoverishment of the blood, the treatment will not be difficult. Exercise freely in the open air; protect the body from chilliness by warm clothing, and plenty of it. The patient should sleep on a mattress, in a well ventilated room. The diet should be nourishing without being stimulating. It is important that the habits should be regular, and the mind kept cheerful by society and innocent amusements.

Before the medical treatment is commenced, the exciting causes of the disease must be removed. A complete change must be made in the existence of the patient. If she is confined closely at school she should be removed; if inclined to confine herself to the house, send her to the country. Picture the danger by the continuance of such a life; give plenty of outdoor exercise. The mental and moral causes are the most difficult to remove, but a change of scenery and new friends will do much toward it. For those who are shut up in factories, or who work all day in a stooping position, a change of employment must be made. A bath of tepid water in the morning followed by a brisk rubbing will be beneficial. If not convenient to take the water bath then an air bath with brisk rubbing is most excellent. During menstruation all applications of water should be omitted.

Tinct. of Iodide of Iron.....3 drops.
Tinct. of Nux Vomica.....2 drops.
Tinct. of Viburnum Opulus.....6 drops.
Tinct. of Veratrum Veride.....3 drops.
Mixed in a full glass of water. Dose, two teaspoonfuls every hour.

PROFUSE MENSTRUATION

There is no fixed amount of blood which is lost at the menstrual period, but it varies in different women. It will average, however, from four to eight ounces.

Causes.—Some women are predisposed to uterine hemorrhages, from a relaxed, or flabby state of the texture of the uterus. Frequent child-bearing, abortion, high living, too prolonged and frequent nursing, may induce flooding. Among the exciting causes we may mention over-exertion, dancing, falls, lifting heavy weights, cold, and mental excitements.

An inordinate flow occurs generally in women of sanguine temperament, whose pulse is strong, and whose circulation is free; again where the passions are strong and exposed to over-excitation, reflex action might determine blood to the generative organs and induce congestions that nature relieves by profuse menstruation. The disease is also common among women of nervous, irritable temper; in those who are corpulent and of indolent habits, and those who live in hot climates or occupy rooms having a high temperature. It is also an hereditary predisposition, and, come from what cause it may, it is generally aggravated during the summer season.

Symptoms.—Exhaustion of the bodily powers, weakness and pain in the back, extending to the hips, and across the loins; sallow and sunken features; headache, with throbbing of the temples, pain in the left side, stomach and bowels; sometimes diarrhœa, with great nervous debility.

Treatment.—The patient must lie down on a hard bed, and abstain from all stimulating food and drinks. The room should be cool, and she should be lightly covered with bedclothes. If the feet are cold put them in hot water for thirty minutes. The hips must be elevated higher than the head.

Flooding, proceeding from any cause, should be treated promptly, as serious consequences may follow its continuance. If flooding is severe use hot water vaginal injections—hot as can be borne—once or twice a day. Take on alternate days the following remedies:

Tinct. of Iron.....3 drops
One full glass of water. Dose, two teaspoonfuls every hour.

On the second day take of
Tinct. of Viburnum Opulus.....6 drops
Tinct. of Belladonna.....2 drops
Peruvian Bark .....6 drops
Mix in full glass of water. Dose, two teaspoonfuls every hour.

PAINFUL MENSTRUATION

The suffering connected with this disorder is of the most intense and acute character, yet thousands of women periodically bear this torture, smiling during the short interval of ease that comes between the spasms. There is a pain-enduring capacity in woman that certainly man knows not of; in the throes of labor she smiles in anticipation of gladness. It is that struggle between the moral and physical from which woman comes out a heroine.

Causes.—Taking cold during the period; fright, violent mental emotions; obstinate constipation; sedentary occupations; smallness of the mouth and neck of the womb. Women subject to this trouble are generally relieved by marriage.

Symptoms.—Severe bearing down pains in the region of the uterus, like labor pains; restlessness, coldness, flashes of heat, with headache; aching in the small of the back, lower part of abdomen, and thighs; the discharge is scanty, and contains shreds of fiber and clotted blood.

Treatment.—Women of a sanguinous temperament should make frequent use of the cold bath, taking the precaution to follow it quickly by brisk, hard and dry rubbing, but nervous and lymphatic temperaments will find the warm bath more conducive to their comfort. During the three or four days just preceding the menses the body should be kept at rest in a reclined position, and every night a hot hip bath should be taken before retiring. Vaginal injections of hot water will afford relief. If the bowels are not free, they should be relieved by warm enemas of water. No iced water, or very cold drinks of any kind, should be taken immediately before or during menstruation; a mouthful of cold water has in many instances brought back all the pains that have been relieved by proper

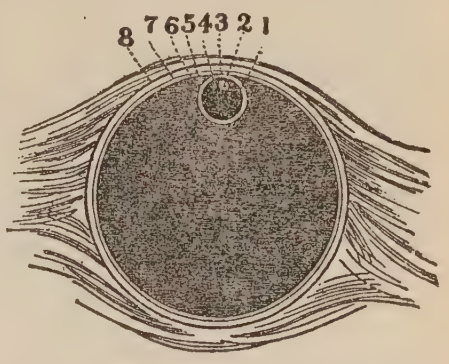
treatment. Dr. Hayden's Viburnum Compound, which is prescribed and recommended by more physicians than any other preparation, is now employed with the greatest success. It is agreeable to the taste, perfectly safe, free from all opiates, and may be obtained in any quantity of any respectable druggist. In cases where one suffers greatly at the monthly periods it is well to commence by taking teaspoonful doses every night for a week previous to the usual time. On the appearance of the flow, one should immediately go to bed, and cover up warmly. Stimulating food and drinks should be avoided. Two-teaspoonful doses of the Viburnum Compound every half hour, in a wine-glassful of hot water, sweetened, and continued until relief is obtained, is wise, unless the stomach rejects it, in which case the dose should be reduced until it is tolerated. Frequently, after taking the Viburnum Compound one will sleep soundly for several hours from the sudden cessation of pain. The Compound does not contain any narcotics whatever, nor does it leave any disagreeable after effects. It may be given to a child, if necessary, without any special caution.

CHAPTER X

PREGNANCY

A HEALTHY married woman, during the period of child-bearing, suddenly ceasing to menstruate, is of itself alone almost a sure and certain sign of pregnancy—requiring but little else to confirm it. This fact is well known by all who have had children—they base their predictions and their calculations upon it, and upon it alone, and are, in consequence, seldom deceived.

But as failure to menstruate may proceed from other causes than that of pregnancy—such as disease or disorder of the womb, or of other organs of the body—especially of the lungs—it is not by itself alone entirely to be depended upon; although, as a single sign, it is—especially if the patient is healthy—the most reliable of all the other signs of pregnancy.



GRAAFIAN VESICLE CONTAINING HUMAN OVUM.

1. Stroma of the tissue of the ovary. 2. External tunics of the Graafian vesicle. 3. Internal tunics of the Graafian vesicle. 4. Cavity of the vesicle. 5. Yolk-sac. 6. The yolk. 7. The germinal vesicle. 8. The germinal spot.

SECOND SYMPTOM

Morning-sickness is one of the earliest symptoms of pregnancy; as it sometimes occurs a few days, and indeed generally not later than two or three weeks, after conception. This sign usually disappears after the first two or three months.

Morning-sickness, then, if it does not arise from a disordered stomach, is one of the most trustworthy signs of pregnancy. It is emphatically a morning-sickness—the patient being, as a rule, for the rest of the day entirely free from the feeling of sickness.

THIRD SYMPTOM

is shooting, throbbing and lancinating pains, and enlargement of the breast, with soreness of the nipples, occurring about the second month; and, in some instances, after the first few months, a small quantity of watery fluid, or a little milk, may be squeezed out of them. This latter symptom, in a first pregnancy, is valuable, and can generally be relied upon as conclusive that the woman is pregnant. It is not so valuable in an after pregnancy, as a little milk might, even should she not be pregnant, remain in the breasts for some months after she has weaned her child.

THE AREOLA.

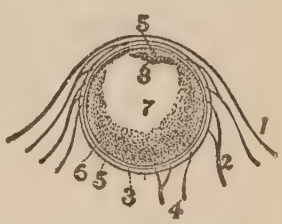
The veins of the breast look more blue, and are consequently more conspicuous than usual, giving the bosom a mottled appearance. The breasts themselves are firmer and more knotty to the touch. The nipples, in the majority of cases, look more healthy than customary, and are somewhat elevated and enlarged.

A dark-brown areola or disc may usually be noticed around the nipple, the change of color commencing about the second month. The tint at first is light brown, which gradually deepens in intensity, until toward the end the pregnancy the color may be very dark. Dr. Montgomery, who paid great attention to the subject, observes: "During the progress of the next two or three months the changes in the areola are, in general, perfected, or nearly so, and then it presents the following characters: A circle around the nipple, whose color varies in intensity according to the

particular complexion of the individual, being usually much darker in persons with black hair, dark eyes and sallow skin, than in those of fair hair, light-colored eyes and delicate complexion. The area of this circle varies in diameter from an inch to an inch and a half, and increases, in most persons, as pregnancy advances, as does also the depth or color. The dark areola is somewhat swollen.

FOURTH SYMPTOM

A fourth symptom is quickening. This generally occurs about the completion of the fourth calendar month; frequently a week or two before the end of that period, at other times a week or two later. A woman sometimes quickens as early as the third month, while others, although rarely, quicken as late as the fifth, and in very rare cases, the sixth month. It will therefore be seen that there is an uncertainty as to the period of quickening, although, as I before remarked, the usual period occurs at four and a half months—or when the pregnancy is half completed.



GRAAFIAN VESICLE OF A MAMMAL.

Quickening is one of the most important signs of pregnancy, and also one of the most valuable. After this time there is less danger of miscarriage.

A woman at this time frequently feels faint. The sensation of quickening is said by many ladies to resemble the fluttering of a bird; by others it is likened to a heaving, beating, or leaping sensation; accompanied, sometimes, with a frightened feeling. These sensations after the first day of quickening usually come on eight or ten times a day, although it may happen for days together that the patient does not feel the movement of the child; or if at all, but very slightly.

Quickening arises from the ascent of the womb into the abdomen. Owing to the increased size there is not room for it below. Another cause of quickening is the child has reached a further stage of development, and has, in consequence, become stronger both in its muscular and

nervous structure, and has strength and motion of limbs, powerful enough to kick and plunge about the womb, and thus cause the sensation of quickening.

The fifth symptom is, immediately after the quickening, increased size and hardness of the abdomen. When not pregnant the abdomen is soft and flaccid; when pregnant, and after quickening, the abdomen, over the region of the womb, is hard and resisting.

The sixth symptom is protrusion of the navel. This symptom does not occur until some time after quickening. During the first two months of pregnancy, the navel is drawn in and depressed. As the pregnancy advances, the navel gradually comes forward.

The seventh symptom is emaciation; the face, especially the nose, is pinched and pointed; the features are altered; the face, as the pregnancy advances, gradually resumes its natural comeliness.

Many a plump lady tells of her pregnancy by her sudden emaciation. There is one comfort, however, for as soon as the pregnancy is over, if not before, the body usually regains its former plumpness.

EIGHTH SYMPTOM

is irritability of the bladder which is, sometimes, one of the early signs of pregnancy. It is, likewise, frequently one of the early symptoms of labor. The irritability of the bladder, in early pregnancy, is oftentimes very distressing and very painful—the patient being disturbed from her sleep several times in the night to urinate—passing generally but a few drops at a time. This symptom usually leaves her as soon as she has quickened; to return again—usually without pain—just before the commencement of labor.

There is very little to be done in such cases, in the way of relief. One of the best remedies is,—a small teaspoonful of Sweet Spirits of Nitre in a wine-glass full of water, taken at bed-time. Drinking plentifully, as a beverage, of barley water with best gum arabic—half an ounce of gum to every pint of barley water—the gum arabic being dissolved in the

barley water by putting them both in a saucepan over the fire, and stirring until the gum is dissolved. This beverage may be sweetened according to taste.

ADDITIONAL SYMPTOMS

Sleepiness often accompanies pregnancy, the patient being able to sleep in season and out of season.

Heartburn.—Some women in pregnancy are much afflicted with heartburn; for affliction it assuredly is; but heartburn, as a rule, although very disagreeable, is rather a sign that the patient will go her time. Heartburn is very amenable to treatment, a prescription for which will be found in the chapter on "Diseases of Women and Children."

Increased flow of saliva is sometimes a symptom of pregnancy, amounting, in rare cases, to regular salivation—the patient being, for a time, in a pitiable condition. It lasts usually for days; sometimes even for weeks, and is most disagreeable, but is not at all dangerous.

Toothache is a frequent sign of pregnancy—pregnancy being often very destructive to the teeth—destroying one with every child! For remedy see "Diseases of Women and Children."

Loss of Appetite.—Some women have, more especially during the early months of pregnancy—wretched appetites; they loathe their food, and dread the approach of meal-times. Others, on the contrary, eat more heartily during pregnancy than at any other period of their lives—they are absolutely ravenous, and can scarcely satisfy their hunger!

The longings of a pregnant woman are sometimes truly absurd; but, like almost everything else, it grows upon what it is fed. They long for roast pig, for pork, raw carrots, raw turnips, raw meat—for anything and for everything that is unwholesome, and which they would at any other time loathe and turn away from in disgust. The best plan of treatment to adopt, is not to give way to such longings, unless they are of a harmless, simple nature, in which case they will soon pass away.

Excitability of mind is very common in pregnancy, more especially if the patient is delicate; indeed, excitability is a sign of debility, and requires plenty of good nourishment, but few stimulants.

PROPER DRESS

There should be no bands about the hips, but in place of them the under-garments should be made continuous from the shoulders and so loose that they would fall over the hips, if not supported from the shoulders. "Skirt supporters" will keep the skirts in position, or better still, one of the numerous forms of "hygienic waists and skirts" may be used. These answer the purpose of the corset, giving a neat and trim appearance to the figure and at the same time allowing full freedom to the waist and increasing abdomen.

AIR AND EXERCISE

Although long walks are injurious, one ought not to run into an opposite extreme—short, gentle, and frequent walks during the whole period of pregnancy cannot be too strongly recommended; indeed, a pregnant woman ought to live half her time in the open air. Fresh air and exercise prevent many of the unpleasant symptoms attendant on that state; they tend to open the bowels, and relieve that sensation of faintness and depression so common in early pregnancy.

Exercise, fresh air and occupation are essentially necessary in pregnancy. If they are neglected, hard and tedious labors are likely to ensue. The easy and quick labors and rapid recoveries of poor women are greatly due to the abundance of exercise and of occupation which they are both daily and hourly obliged to get through. Many a poor woman thinks but little of confinement, while a rich one is full of anxiety about the result. Let the rich lady adopt the poor woman's industrious and abstemious habits, and labor need not then be looked forward to, as it frequently now is, either with dread or with apprehension.

Bear in mind that a lively, active woman has an easier and quicker confinement, and a finer race of children, than one who is lethargic and indolent. Idleness brings misery, anguish, and suffering in its train, and particularly affects pregnant women. Oh, that these words would have due weight, then this book will not have been written in vain! The hardest work in the world is having nothing to do!

Stooping, lifting of heavy weights, and overreaching, ought to be carefully avoided. Running, horseback riding and dancing, are likewise dangerous—they frequently induce miscarriage.

VENTILATION

Let every woman look well to the ventilation of her house; let her take care that every chimney is unstopped, and during the daytime that the windows in unoccupied rooms are thrown open. Where there is a skylight at the top of the house, it is well to have it made to open and shut, so that in the daytime it may, winter and summer, be always open.

The cooping-up system engenders all manner of infectious and loathsome diseases, and not only engenders them, but feeds them, and thus keeps them alive. There is nothing wonderful in all this, if we consider, but for one moment, that the exhalations from the lungs are poisonous. The lungs give off carbonic acid gas (a deadly poison), which, if it is not allowed to escape, must be breathed over and over again. If the perspiration of the body (which in twenty-four hours amounts to two or three pounds!) is not permitted to escape from the apartment, it must become fœtid—repugnant, sickening, and injurious to the health. The nose is a sentinel, and often warns its owner of approaching danger!

To destroy the smell is not to destroy the danger; certainly not! The right way is to remove the cause, and the effect will cease. Flushing a sewer is far more efficacious than disinfecting one. Soap and water, the scrubbing brush, sunshine and thorough ventilation, each and all are far more beneficial than either permanganate of potash, chloride of zinc, or chloride of lime. People in these times think too much of disinfectants, and too little of removal of causes; they think too much of artificial, and too little of natural means.

DRINKING WATER

Look well to the purity of the well water, and ascertain that no drain either enters, percolates, or contaminates it in any way whatever. If it should do so, disease, such as cholera, diarrhœa, dysentery, diphtheria,

scarlet fever or gastric fever will, as a matter of course, ensue. If there is the slightest danger or risk of drain contamination, whenever it is practicable let the drain be taken up and examined, and the defect carefully rectified. When it is impracticable to have the drain taken up and examined, then always boil the water before using.

CHAPTER XI

DISCOMFORTS OF PREGNANCY

THE Creator never intended that pregnancy should be a source of disease, but ignorance, false modesty, fashion, previously acquired diseases of the womb, a weak constitution and bad training in girlhood, in many cases laid the foundation of serious troubles which affect women often seriously during pregnancy.

In order to best help such suffering ones, I first give a brief account of such discomforts, and then prescribe safe and simple remedies for their alleviation.

A WORD TO HUSBANDS

To you, husbands, I say, reflect upon the manifold inconveniences and annoyances that your wife must labor under while pregnant. The love which you gave her before the altar—double it now. Think of the suffering you are spared which she must undergo to give you the delight of paternity. In doubling your attentions, in anticipating her desires, in calming her fears, in soothing her irritations, you do only your duty, though, it should also be your highest pleasure. Do it cheerfully; let your devotion spring from a manly heart, from the heart of a true husband. What was a molehill to your wife before must be a mountain now. Smooth her rugged path, shade her from the burning flame of mental agitation, encourage her, inspire her with hope, and when the time comes that she lies prostrated, her face beaming with happiness at the sound of her first-born, thank God that you have been kind to her.

MENTAL WORRIES

Such are, undefined fear of pending evil, anxiety about the future, and fear of dying, forebodings and gloom, even to despair, often overtake her. These disturbances, although they may have no cause, are serious

in the extreme. It is important to a mother's well being, and to a happy termination of her pregnancy, that these illusions should be conquered. Serious consequences have been produced by an over-wrought imagination. This dark phantom that hangs over the reason of the sick one should be chased away. This must be done without an effort or apparent purpose, else the object may be defeated by making her aware that care and kindness are induced by solicitude. Bring home a good book, a favorite fruit, or a mutual friend, with whom you may enter into an innocent conspiracy for her good. Invite her to take a walk, and then do not rush her through an unfeeling crowd, but walk leisurely in a favorite place, call her attention to objects of interest, and even to trifles that may have amused her before.

Have some congenial friends at home, a bit of music, or any sort of innocent game and moderate gaiety, a little surprise party of dropping-in friends—some genial, happy faces. If it is necessary, an innocent plot with your friends may be formed to get her out some evening to a social meeting, a lecture, a concert, or a lively, pleasing drama. If the rooms or halls are too hot or crowded, you may show solicitude enough to take her home. Cheerful fireside, unstinted sacrifices, loving sympathy, will rob the mind of many a dark shadow. Change of scene, short, easy journeys to favorite cities or spots, is a source of pleasant and healthy excitement that will invigorate body and mind. Be never weary, and success and happiness will crown your noble efforts.

MUSCULAR PAINS OF THE ABDOMEN

The best remedy is an abdominal belt, constructed for pregnancy, and adjusted to fit the abdomen. It is made with straps and buckles to accommodate the gradually increasing size of the abdomen. This plan often affords great comfort and relief; indeed, in some severe cases, such belts are indispensable.

DIARRHŒA

Although the bowels in pregnancy are generally costive, they are sometimes in an opposite state, and are relaxed. This relaxation is

frequently due to continual constipation, and nature is trying to relieve itself by purging. Such being the case, the patient ought to be careful of astringents as they interfere with relaxation. Sometimes nature succeeds; at other times it is advisable to give a mild aperient such as olive oil, tincture of rhubarb, or rhubarb and magnesia. If olive oil, a teaspoonful swimming on a little new milk, will generally answer the purpose. If tincture of rhubarb, a tablespoonful in two of water.

The diet should be simple, plain and nourishing and should consist of beef tea, of chicken broth, of arrowroot, and of well-made and well-boiled oatmeal gruel. Meat ought not to be eaten; and stimulants of all kinds must be avoided.

If the diarrhœa is attended with pain in the bowels, a flannel bag filled with hot table salt, and applied to the part affected, will afford great relief. A hot water bag, in a case of this kind, is a great comfort. The patient should, as soon as the diarrhœa has disappeared, gradually return to her usual diet, which ought to be plain, wholesome and nourishing. She should pay particular attention to keeping her feet warm and dry; and, if subject to diarrhœa, she should wear around her bowels, and next the skin, a broad flannel band.

SLEEPLESSNESS

Pregnant women of nervous temperament are often kept awake night after night without apparent cause. This is produced by the slighest mental excitement, or by the motions of the child; again by eating or indulging in a cup of tea or coffee before retiring.

Close confinement to one's room and want of exercise may also be the cause. This may be borne without inconvenience, in case the patient gets some few hours of sleep, and awakes refreshed in the morning. But in some instances the patient suffers severely; does not sleep a minute; becomes feverish, restless and agitated; she loses her appetite, and becomes weak and prostrated, her mind begins to suffer, and she becomes fretful, whimsical, and even irrational.

The treatment consists in sleeping in a well-ventilated apartment, on

a hair mattress, taking care that the bed is not overloaded with clothes; a thorough bath every morning, and a good washing with cold water of face, neck, chest, arms and hands every night; shunning hot and close rooms; taking plenty of outdoor exercise; living on a bland, nourishing, but not rich diet; avoiding meat suppers, and substituting, in lieu thereof, either a cupful of arrowroot, made with milk, or of well-boiled oatmeal gruel; avoiding stimulants of all kinds; drinking morning and evening cocoa, instead of tea or coffee.

An attack of the fidgets during the night may be relieved by taking a short walk up and down the room; drinking half a glass of cold water; emptying the bladder and turning the pillow, so as to have the cold side next the head, and then lie down again. The chances are that the patient will now fall asleep.

During the day a ride in an open carriage; a stroll in the garden, or in the field; or a little housewifery, will do her good. There is nothing like fresh air, exercise, and occupation, to drive away the fidgets. It is generally those that have nothing to do who are thus affected. The poor woman who has to work for her daily bread does not know what the fidgets mean. Here again we see the value of occupation—of having plenty to do! Idleness is criminal, and deserves punishment. It assuredly is, and always will be punished!

HEARTBURN AND WATER-BRASH

are common and often distressing symptoms of pregnancy. The acid producing these is frequently much increased by an overloaded stomach. The patient labors under the mistaken notion that, as she has two to sustain, she requires more food during this than any other time; she consequently is induced to take more than her appetite demands, and more than her stomach can digest; hence heartburn, indigestion, etc., are caused, and her unborn babe, as well as herself, is thereby weakened. For remedy, see "Diseases of Women and Children."

A wholesome diet ought to be strictly observed. Great attention should be paid to the quality of the food; greens, pastry, hot-buttered

toast, melted butter, and everything that is rich and gross, should be carefully avoided.

GAS IN THE STOMACH AND BOWELS

is a frequent reason why a pregnant woman cannot sleep at night. The two most frequent causes of flatulence are the want of walking exercise during the day, and the eating of a hearty supper just before going to bed. The remedies are, in each instance, self-evident. It is folly in either case to give medicines, when avoidance of the cause is the only right and proper remedy. How much physic might be dispensed with if people would only take nature and common sense for their guides; but no, they would rather take a pill—it is less trouble!—than walk a mile; they would prefer a hearty meat supper to sweet and refreshing sleep! What extraordinary tastes some persons have! Luxury and self-indulgence are, alas! the crying evils of the day. Remedy, see "Diseases of Women."

PILES

are a common attendant upon pregnancy. They are small, soft, spongy, dark-red tumors—enlarged veins—about the size either of a bean or of a cherry—sometimes as large as a walnut—and are either within or around the fundament. They are, according to their situation, called either internal or external piles. They may be either blind or bleeding. If the latter, blood may be seen exuding from them, and will come away every time the patient has a stool. For this reason the patient ought to be as quick as possible in relieving the bowels, and should not at such times sit one moment longer than is necessary.

When the piles are very large, they sometimes, more especially during a motion, drag down a portion of the bowel, which adds much to the suffering. If the bowel should protrude, it ought, by means of the index-finger, to be immediately and carefully returned, taking care, in order that it may not scratch the bowel, that the nail is cut closely.

If the piles are inflamed and painful, they ought, by means of a sponge, to be well fomented three times a day, and for half an hour each time, with

hot camomile and poppy-head tea. Take four poppy-heads and four ounces of camomile blows, and boil them in four pints of water for half an hour, to make the fomentation, which should then be strained, and made quite hot in a saucepan when required.

Every time after and before the patient has a motion, it is well to anoint the piles and the fundament with witch hazel.

The bowels ought to be kept gently and regularly opened.

An electuary, composed of chopped figs, raisins, and senna, in a case of piles, is another admirable remedy for opening the bowels.

Take one ounce of best Alexandria Senna (powdered), two ounces Figs, two ounces Raisins (stoned).

All chopped very fine. The size of a nutmeg, or two, to be eaten either early in the morning or at bedtime.

Magnesia and milk of sulphur is an excellent remedy for the piles:

Carbonate of Magnesia,
Milk of Sulphur, } of each three drams.

Mix.—Make nine powders. Take one early every or every other morning, mixed in half a cupful of milk.

Remember, in these cases, it is necessary to keep the motions in a softened state, as hard lumps of stool would, in passing, give intense pain.

In piles, if they are not much inflamed, and there is constipation, a pint of tepid water, administered early every morning as an enema, will be found serviceable. Care and gentleness ought to be observed in introducing the enema-pipe, in order not to press unduly on the surrounding piles.

The patient ought to lie down frequently in the day. She will derive great comfort from sitting on an air-cushion placed on the chair.

In piles, the patient ought to live on a plain, nourishing, simple diet, but should avoid all stimulants; any food or beverage that will inflame the blood will likewise inflame the piles.

Piles in pregnancy are frequently troublesome, and sometimes resist all treatment until the patient is confined, when they generally get well

of themselves, but still the remedies recommended above will, even if they do not effect a cure, usually afford great relief.

SWOLLEN LEGS (VARICOSE VEINS)

The veins are frequently much enlarged and distended, causing the limbs to be greatly swollen and very painful, preventing the patient from taking proper walking exercise. Swollen legs are owing to the pressure of the womb upon the bloodvessels above.

The best plan will be to wear an elastic silk stocking, which ought to be made for her, in order that it may properly fit the leg and foot. It will draw on like a common stocking. She ought to wear a gauze stocking next to the skin, and the elastic stocking over it, as the gauze stocking can then, from time to time, be washed. The gauze stocking will also be more comfortable next the skin. In the absence of the silk-elastic stocking a flannel or gauze bandage is very good.

If the varicose veins should become more painful, it would be well to call a physician, as it may be necessary to have them enveloped in mild plasters, and then rolled.

STRETCHING OF THE SKIN OF THE ABDOMEN

is frequently, especially in a first pregnancy, distressing, from the soreness it causes. The best remedy is to rub the bowels, every night and morning, with warm olive oil.

If the skin of the abdomen, from the violent stretching, should be cracked, the patient had better dress the part affected, every night and morning, with equal parts of simple cerate and olive oil, well mixed together, spread on lint.

A woman sometimes, from being at these times unusually large, suffers severely; so much so, that she cannot, without experiencing great inconvenience, move about. This is in case she is stout, and where she has had a large family of children.

She ought, in such a case, to use either an elastic abdominal belt or make one of unbleached muslin, which will, without undue pressing on the abdomen, become a support.

TOOTHACHE

is a frequent complaint of pregnancy, and yet I wish to caution my reader against having a tooth extracted while pregnant. Miscarriage or premature labor has frequently followed the extraction of a tooth. It is necessary that this advice should be borne in mind, as the pain is sometimes so excruciating as to cause the sufferer to seek, at all hazards, speedy relief by extraction.

If the tooth is decayed, the hollow ought to be filled with absorbent cotton, soaked either in oil of cloves, or in equal parts of oil of cloves and of chloroform, and be frequently renewed. Another excellent remedy is a little alum dissolved in chloroform: Ten grains of powdered alum to half an ounce of chloroform. Another excellent remedy is the hot water bag or hot birch. A bit of cotton placed in the ear of the affected side, will oftentimes relieve the toothache arising from a decayed tooth. This simple remedy ought always to be tried before resorting to more active treatment. If the above remedies do not relieve, soak a small ball of cotton in chloroform, and insert in the ear, and let it remain until the pain is relieved; let it be renewed from time to time. I have frequently found the above plan in toothache most efficacious, and to afford relief when other means have failed.

Creasote (spirits of tar) is sometimes applied, but of all remedies it is the worst for the purpose. I have known it, when thus used, to severely injure and decay the whole of the remaining teeth.

MORNING SICKNESS

It is said to be "morning," as in these cases, unless the stomach is disordered, it seldom occurs during any other part of the day. Morning sickness may be distinguished from the sickness of a disordered stomach by the former occurring only early in the morning, on the first sitting up in bed, the patient, during the remainder of the day, feeling quite free from sickness, and generally being able to eat and relish her food, as though nothing ailed her.

Morning sickness begins early in the morning, with a sensation of

nausea, and as soon as she rises from bed she feels sick and retches; and sometimes, but not always, vomits a little sour, watery, glairy, fluid; and occasionally, if she has eaten heartily at supper the night before, the contents of the stomach are ejected. She then feels all right again, and is usually ready for her breakfast, which she eats with her usual relish. Many women have better appetites during pregnancy than at any other period of their lives.

The sickness of a disordered stomach unaccompanied with pregnancy may be distinguished from morning sickness by the former continuing during the whole day, by the appetite remaining bad after the morning has passed, by a disagreeable taste in the mouth, and by the tongue being generally coated. In such cases there is usually much flatulence. The patient not only feels, but looks, bilious.

If the stomach is disordered during pregnancy, there will be a complication of the symptoms, and the morning sickness may become both day and night sickness. Proper means should then be employed to rectify the disordered stomach, and the patient will soon have only the morning sickness to contend against; which latter, after she has quickened, will generally leave of its own accord.

A good way to relieve it is by taking, before rising in the morning, a cup of hot water. If this should not have the desired effect, then take a lump of magnesia the size of a hickory nut.

Sometimes one had best drink plentifully of hot water.

The morning sickness, during the early months, is caused by sympathy between the stomach and the womb; and during the latter months by pressure of the upper part of the womb against the stomach. As we cannot remove the sympathy and the pressure, we cannot always relieve the sickness; the patient is sometimes obliged to bear with the annoyance. The bowels ought to be kept well regulated.

Great attention should be paid to the diet; it should be moderate in quantity, and simple in quality. Rich dishes, highly seasoned soups, and melted butter, must be avoided. Hearty meat suppers ought not on any account to be allowed. If anything is taken at night, there is nothing

better than either a teacupful of nicely made and well-boiled oatmeal gruel, or of arrowroot with plenty of fruit. Either of the above may be made with water, or with new milk, or with cream and water.

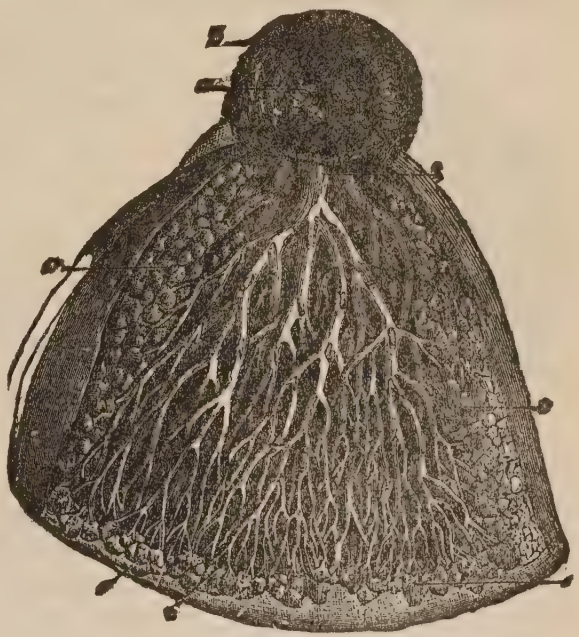
It is an old saying, and I believe, as a rule, a true one, "that sick pregnancies are safe," more especially if the sickness leaves, which it generally does, after quickening. The above remarks do not include obstinate, inveterate vomiting, occasionally occurring in the latter period of pregnancy, and which not only takes place in the morning, but during the whole of the day and of the night, and for weeks together, sometimes bringing a patient to the brink of the grave. Such a case, fortunately, is extremely rare. Another old and generally true saying is, "that women who have sick pregnancies seldom miscarry." There is another consolation for those who suffer from morning sickness, from heartburn, and the numerous other discomforts of pregnancy, namely, they frequently have kinder labors, more lively children, and more comfortable recoveries than those who, at such times, do not suffer at all. Compensation here, as in almost everything else in this world, is found to prevail.

TO HARDEN THE NIPPLES

A mother sometimes suffers severely from sore nipples. Especially is this true with the first child. Such suffering may frequently be prevented, if for six weeks or two months before confinement, the nipples are bathed for five minutes every night and morning, either with merigold ointment or with equal parts of brandy and water. A soft piece of fine old linen mull should be used for the purpose of bathing. All pressure ought to be taken from the nipples. If the stays unduly press them, either let them be enlarged or, better still, entirely removed. The nipples themselves ought to be covered with soft linen, as the friction of a flannel vest would be apt to irritate them. Let me recommend every pregnant woman, more especially in a first pregnancy, to adopt either one or the other of the above plans to harden the nipples. It may avert much misery, as sore nipples are painful and distressing. Prevention at all times is better than cure.

The breasts are, at times, during pregnancy, much swollen and very painful; and occasionally cause the patient great uneasiness. She fancies that she is going to have either a tumor or a gathering of the breast. There need, in such cases, be no apprehension. The swelling and the pain are the consequence of pregnancy, and will, in due time, subside without any unpleasant result. The fact is, great changes are taking place in the breasts; they are developing and are preparing for the important functions they will soon have to perform.

Treatment. — Every night and morning rub them well with equal parts of eau de Cologne and of olive oil, and wear a piece of new flannel over them, taking care to cover the nipples with soft linen. The liniment encourages a little milky fluid to ooze out of the nipple, which affords relief.



MAMMARY GLAND.

a, nipple, the central portion of which is retracted; b, areola; c, c, c, c, c, lobules of the gland; 1, sinus or milk duct; 2, extremities of the milk duct.

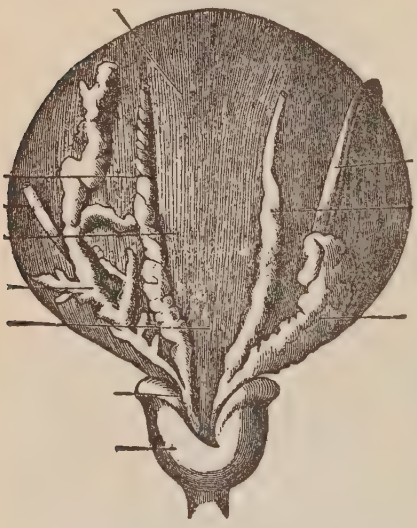
IRRITABILITY OF THE BLADDER

The patient during pregnancy is liable to various affections of the bladder. There is sometimes a sluggishness of that organ, with little or no inclination to urinate. At other times there is a great irritability and constant desire to pass urine; while in a third case, more especially toward the end of pregnancy, the urine can hardly be retained—the slightest bodily exertion, such as walking, stooping, coughing, sneezing, etc., causes it to pass involuntarily,

and even in some cases, where the patient is perfectly quiet, it passes without her having the power to prevent it.

A sluggish state of the bladder is best remedied by gentle exercise, and by the patient attempting to make water at least every four hours.

For the relief of the above trouble mix 6 drops of gelsemium in glass of water and take tablespoonful every hour.



THE BLADDER.

The bowels ought to be kept gently open and the patient should live on a mild, bland, nourishing diet.

FAINTING

A delicate woman in pregnancy is apt to feel faint, or does actually faint away. When we consider the enormous changes that take place during pregnancy, and the great pressure there is upon the nerves and the bloodvessels, it is not at all surprising that this is true. Fainting at such times is disagreeable, but not at all dangerous, unless the patient is subject to heart disease.

The first thing to be done in fainting, is to lay the patient flat on the bed with the head even or lower than the rest of the body. The stays and any tight articles of dress ought to be loosened; the windows should be thrown wide open; water ought to be sprinkled on her face; aqua ammonia held to the nostrils, or a glass of wine can with good effect be administered. The attendants should not crowd around her, as she ought to have plenty of fresh air.

She must, in the intervals, live on good, light, generous diet, keep early hours, and sleep in a well-ventilated apartment. The following strengthening tonic will be found serviceable.

Tinct. of Peruvian Bark.....6 to 10 drops.
Tinct. of Nux Vomica..... 2 drops.
Mix in full glass of water. Dose, two teaspoonfuls three times a day. Continue ten days.

PALPITATION OF THE HEART

A nervous patient during this period is subject to palpitation of the heart. This palpitation, provided it occur only during pregnancy, is not dangerous, and need not cause alarm. It is occasioned by the pressure of the womb upon the large bloodvessels, which induces a temporary derangement of the heart's action. This palpitation is generally worse at night, when the patient is lying down. When lying down, the midriff, because of the increased size of the abdomen, is pressed upward, and for this reason the heart has not its accustomed room in which to work, and palpitation is the result.

A small towel wrung out in very hot water and placed over the heart and over this a dry towel will afford immediate relief. If the feet are cold a hot water bag will prove helpful.

CRAMPS

Cramps of the legs and thighs are apt to attend pregnancy, especially at night and during the latter months; they are caused by pressure of the womb upon the nerves which extend to the lower extremities. Treatment.—Tightly tie a folded handkerchief round the limb a little above the part affected, and let it remain for a few minutes. Friction by means of the hand is most excellent; so also is a few drops of gelsemium rubbed upon the afflicted part. Cramps sometimes attack either the bowels or the back of a pregnant woman; when such is the case, let a bag of hot salt, or a hot water bottle, be applied over the part affected; and let a bottle of hot water or a hot brick, encased in flannel, be placed to the soles of the feet. If cramps of the bowels, the back, or the thighs are very severe, the following mixture will be serviceable:

LEUCORRHŒA OR WHITES

The whites, especially during the latter months, and particularly if the patient has borne many children, are troublesome, and are, in a measure,

owing to the pressure of the womb on the parts below, causing irritation. The best way to obviate such pressure is for the patient to lie down a great part of each day. She ought to retire early, sleep on a hair mattress, and in a well ventilated apartment. A thick, heavy quilt at these times, and indeed at all times, is particularly objectionable; the perspiration cannot pass readily through it as through blankets, or eider down comfortables. The bowels ought to be gently opened.

The best application is to bathe the parts with a teaspoonful of powdered borax in a quart of warm water. The internal parts ought, night and morning, to be syringed with it.

Cleanliness, in these cases, cannot be too strongly urged. Indeed, every woman, either married or single, ought, unless special circumstances forbid, to use a douche of warm water at least once a week.

IRRITATION AND ITCHING OF THE EXTERNAL PARTS

This is a most troublesome affection, and may occur at any time, but more especially during the latter period of pregnancy. It is a subject upon which a woman is too delicate and too sensitive to consult a physician, and the misery it entails, if not relieved, is almost past endurance.

In the first place, the diet should be simple and nourishing; avoiding stimulants of all kinds. In the next place, use a tepid salt and water sitz-bath. Put a large handful of table salt into the sitz-bath, then add cold water to the depth of three or four inches, and sufficient hot water to make the water tepid or lukewarm. One should sit in the bath only a few seconds. People generally derive great comfort and benefit from these salt and water sitz-baths. It is an important item of treatment.

If the itching continues, the following lotion ought to be used:

Powdered chlorate of potash in the proportion of a teaspoonful to a quart of hot water. Bathe frequently and when lying down apply a compress of same.

THRUSH

The external parts, and the passage to the womb (the vagina) are not only irritable and itching, but are sometimes hot and inflamed, and

are covered either with small pimples, or with a whitish exudation of the nature of aphtha (thrush), somewhat similar to the thrush on the mouth of an infant. For an injection use powdered boracic acid, one teaspoonful to a quart of hot water. Or the following may be used as an injection:

Dried white oak bark, one-half pound;
Water, six quarts;

Boil down to one gallon and strain. Reduce one-half with hot water, and use with fountain syringe.

FALSE LABOR PAINS

False labor pains, especially in a first pregnancy, are sometimes troublesome. These pains usually come on at night, and are frequently owing to a disordered stomach. They affect the abdomen, the back and the loins; and occasionally they extend down the hips and the thighs. They attack first one place and then another; they come on at irregular intervals; at one time they are violent, at another they are feeble. The pains, instead of being grinding or bearing down, are more of a colicky nature.

As these false pains more frequently occur in a first pregnancy, and as they are often more violent two or three weeks toward the completion of the full time, and as they usually come on either at night or in the night, it behooves one to be cognizant of the fact, in order that they may not make a false alarm, and summon the doctor before he is really wanted, and when he cannot be of the slightest benefit to the patient.

It is sometimes stated that a woman has been in labor two or three weeks before the child was born! Such is not the fact. The case in question is one probably of false pains ending in true pains.

How, then, is the patient to know that the pains are false and not true labor pains? False labor pains come on three or four weeks before the full time; true labor pains at the completion of the full time; false pains are unattended with "show;" true pains generally commence the labor with "show;" false pains are generally migratory—changing from place to place—first attacking the loins, then the hips, then the lower portions, and even other portions of the abdomen—first one part, then another; true pains generally begin in the back; false pains commence as spasmodic

pains; true pains as grinding pains; false pains come on at uncertain periods, at one time a quarter of an hour elapsing, at others, an hour or two hours between each pain—at one time the pain is sharp, at another, trifling; true pains come on with tolerable regularity, and gradually increase in severity.

But remember—the most valuable distinguishing symptom is the absence of show in false labor pains, and the presence of it in true labor pains. It might be said that show does not always usher in the commencement of labor. Granted; but such cases are exceedingly rare, and may be considered as the exception and not the rule.

The patient ought to abstain for a day or two from all stimulants. Either hot salt, in a flannel bag, or a hot water bottle applied every night at bedtime to the abdomen, frequently affords great relief.

Tinct. of Helonine.....6 drops.
One full glass of water. Dose, two teaspoonfuls every hour. This is highly beneficial whether the labor pains are true or false.

PERIOD OF GESTATION

is usually two hundred and eighty days—forty weeks—ten lunar or nine calendar months. It will be well to commence the estimate about three days after the last day of menstruation.

A good plan is as follows: Let forty weeks and a few days, from the time specified above, be marked on a calendar, and the date will seldom be far from correct. Suppose, for instance, the last day of menstruation was on January the 15th, the patient may expect to be confined on or about October the 25th.

I may in passing, just point out the great importance of a wife making, every time, a note of the last day of her periods; by doing so it may save her a great deal of inconvenience, uncertainty, and anxiety.

WHEN WILL CONFINEMENT TAKE PLACE

The following table, showing the probable commencement, duration, and completion of pregnancy, and indicating the date on or about which day the labor might occur, will, I trust, be found very useful. This table

allows three days over the 280 days—making 283 days; that is, the count of 280 days commences three days after the last day of menstruation. The reason I have chosen the third day is, that conception is more likely to take place a few days—say three days—after the last day of the periods than at any other time.

A PREGNANCY TABLE.

Last day of the Periods.		Labor On or about.	
Jan.	1	Oct.	11
"	2	"	12
"	3	"	13
"	4	"	14
"	5	"	15
"	6	"	16
"	7	"	17
"	8	"	18
"	9	"	19
"	10	"	20
"	11	"	21
"	12	"	22
"	13	"	23
"	14	"	24
"	15	"	25
"	16	"	26
"	17	"	27
"	18	"	28
"	19	"	29
"	20	"	30
"	21	"	31
"	22	Nov.	1
"	23	"	2
"	24	"	3
"	25	"	4
"	26	"	5
"	27	"	6
"	28	"	7
"	29	"	8
"	30	"	9
"	31	"	10
Feb.	1	"	11
"	2	"	12
"	3	"	13

Last day of the Periods.		Labor On or about.	
Feb.	4	Nov.	14
"	5	"	15
"	6	"	16
"	7	"	17
"	8	"	18
"	9	"	19
"	10	"	20
"	11	"	21
"	12	"	22
"	13	"	23
"	14	"	24
"	15	"	25
"	16	"	26
"	17	"	27
"	18	"	28
"	19	"	29
"	20	"	30
"	21	Dec.	1
"	22	"	2
"	23	"	3
"	24	"	4
"	25	"	5
"	26	"	6
"	27	"	7
"	28	"	8
Mar.	1	"	9
"	2	"	10
"	3	"	11
"	4	"	12
"	5	"	13
"	6	"	14
"	7	"	15
"	8	"	16
"	9	"	17

Last day of the Periods.	Labor On or about.
Mar. 10	Dec. 18
" 11	" 19
" 12	" 20
" 13	" 21
" 14	" 22
" 15	" 23
" 16	" 24
" 17	" 25
" 18	" 26
" 19	" 27
" 20	" 28
" 21	" 29
" 22	" 30
" 23	" 31
" 24	Jan. 1
" 25	" 2
" 26	" 3
" 27	" 4
" 28	" 5
" 29	" 6
" 30	" 7
" 31	" 8
April 1	" 9
" 2	" 10
" 3	" 11
" 4	" 12
" 5	" 13
" 6	" 14
" 7	" 15
" 8	" 16
" 9	" 17
" 10	" 18
" 11	" 19
" 12	" 20
" 13	" 21
" 14	" 22
" 15	" 23
" 16	" 24
" 17	" 25
" 18	" 26
" 19	" 27
" 20	" 28
" 21	" 29
" 22	" 30

Last day of the Periods.	Labor On or about
April 23	Jan. 31
" 24	Feb. 1
" 25	" 2
" 26	" 3
" 27	" 4
" 28	" 5
" 29	" 6
" 30	" 7
May 1	" 8
" 2	" 9
" 3	" 10
" 4	" 11
" 5	" 12
" 6	" 13
" 7	" 14
" 8	" 15
" 9	" 16
" 10	" 17
" 11	" 18
" 12	" 19
" 13	" 20
" 14	" 21
" 15	" 22
" 16	" 23
" 17	" 24
" 18	" 25
" 19	" 26
" 20	" 27
" 21	" 28
" 22	Mar. 1
" 23	" 2
" 24	" 3
" 25	" 4
" 26	" 5
" 27	" 6
" 28	" 7
" 29	" 8
" 30	" 9
" 31	" 10
June 1	" 11
" 2	" 12
" 3	" 13
" 4	" 14
" 5	" 15

Last day of the Periods.	Labor On or about.
June 6	Mar. 16
" 7	" 17
" 8	" 18
" 9	" 19
" 10	" 20
" 11	" 21
" 12	" 22
" 13	" 23
" 14	" 24
" 15	" 25
" 16	" 26
" 17	" 27
" 18	" 28
" 19	" 29
" 20	" 30
" 21	" 31
" 22	April 1
" 23	" 2
" 24	" 3
" 25	" 4
" 26	" 5
" 27	" 6
" 28	" 7
" 29	" 8
" 30	" 9
July 1	" 10
" 2	" 11
" 3	" 12
" 4	" 13
" 5	" 14
" 6	" 15
" 7	" 16
" 8	" 17
" 9	" 18
" 10	" 19
" 11	" 20
" 12	" 21
" 13	" 22
" 14	" 23
" 15	" 24
" 16	" 25
" 17	" 26
" 18	" 27
" 19	" 28

Last day of the Periods.	Labor On or about.
July 20	April 29
" 21	" 30
" 22	May 1
" 23	" 2
" 24	" 3
" 25	" 4
" 26	" 5
" 27	" 6
" 28	" 7
" 29	" 8
" 30	" 9
" 31	" 10
Aug. 1	" 11
" 2	" 12
" 3	" 13
" 4	" 14
" 5	" 15
" 6	" 16
" 7	" 17
" 8	" 18
" 9	" 19
" 10	" 20
" 11	" 21
" 12	" 22
" 13	" 23
" 14	" 24
" 15	" 25
" 16	" 26
" 17	" 27
" 18	" 28
" 19	" 29
" 20	" 30
" 21	" 31
" 22	June 1
" 23	" 2
" 24	" 3
" 25	" 4
" 26	" 5
" 27	" 6
" 28	" 7
" 29	" 8
" 30	" 9
" 31	" 10
Sept. 1	" 11

Last day of the Periods.	Labor On or about.
Sept. 2	June 12
" 3	" 13
" 4	" 14
" 5	" 15
" 6	" 16
" 7	" 17
" 8	" 18
" 9	" 19
" 10	" 20
" 11	" 21
" 12	" 22
" 13	" 23
" 14	" 24
" 15	" 25
" 16	" 26
" 17	" 27
" 18	" 28
" 19	" 29
" 20	" 30
" 21	July 1
" 22	" 2
" 23	" 3
" 24	" 4
" 25	" 5
" 26	" 6
" 27	" 7
" 28	" 8
" 29	" 9
" 30	" 10
Oct. 1	" 11
" 2	" 12
" 3	" 13
" 4	" 14
" 5	" 15
" 6	" 16
" 7	" 17
" 8	" 18
" 9	" 19
" 10	" 20
" 11	" 21
" 12	" 22
" 13	" 23
" 14	" 24
" 15	" 25

Last day of the Periods.	Labor On or about.
Oct. 16	July 26
" 17	" 27
" 18	" 28
" 19	" 29
" 20	" 30
" 21	" 31
" 22	Aug. 1
" 23	" 2
" 24	" 3
" 25	" 4
" 26	" 5
" 27	" 6
" 28	" 7
" 29	" 8
" 30	" 9
" 31	" 10
Nov. 1	" 11
" 2	" 12
" 3	" 13
" 4	" 14
" 5	" 15
" 6	" 16
" 7	" 17
" 8	" 18
" 9	" 19
" 10	" 20
" 11	" 21
" 12	" 22
" 13	" 23
" 14	" 24
" 15	" 25
" 16	" 26
" 17	" 27
" 18	" 28
" 19	" 29
" 20	" 30
" 21	" 31
" 22	Sept. 1
" 23	" 2
" 24	" 3
" 25	" 4
" 26	" 5
" 27	" 6
" 28	"

Last day of the Periods.	Labor On or about.
Nov. 29	Sept. 8
" 30	" 9
Dec. 1	" 10
" 2	" 11
" 3	" 12
" 4	" 13
" 5	" 14
" 6	" 15
" 7	" 16
" 8	" 17
" 9	" 18
" 10	" 19
" 11	" 20
" 12	" 21
" 13	" 22
" 14	" 23
" 15	" 24
Dec. 16	Sept. 25
" 17	" 26
" 18	" 27
" 19	" 28
" 20	" 29
" 21	" 30
" 22	Oct. 1
" 23	" 2
" 24	" 3
" 25	" 4
" 26	" 5
" 27	" 6
" 28	" 7
" 29	" 8
" 30	" 9
" 31	" 10

This pregnancy table may, as a rule, be safely relied upon. Many of my patients have for years, from these estimates, been often confined on the very day specified. I say often as it is utterly impossible to fix upon the exact day—the approximate day can only be specified—some women being at their full time as early as the thirty-seventh week; while others, although but very rarely, are not at their full time until the forty-fifth week—hence the uncertainty in some cases of such calculations.

A woman may, by becoming pregnant while nursing, be put out of her reckoning. Not being unwell at such a time, she consequently does not know how to count. She ought in this case to take the time of quickening as a starting point, from which time, count ahead one hundred and fifty-six days. It must be borne in mind, however, that so correct an estimate can never be made, quickening taking place at a date varying in different individuals. Occasionally a wrong estimate may be made, owing to the fact that some women have a slight menstruation the first and even succeeding months after conception has taken place. These cases are rare, however, and when they do occur the last normal period should be taken from which the estimate should be made.

CHAPTER XII

PRE-NATAL INFLUENCE AND CULTURE

TO WHAT grander achievement can either woman or man aspire than to be an artist in that noblest of arts, the moulding and rearing of immortal beings?

The mystery of that which we designate life will always remain a mystery, and yet there are connected with its development facts so indisputable, so continually proven in the examples all about us, that they are worthy of more than the passing thought usually bestowed upon them. For various reasons this subject is avoided; sometimes by reason of ignorance of its importance; by some because of their indifference, and by a still greater number because of improper teaching and false modesty.

It should be handled delicately and tenderly, because of its sacredness, but it should be written of, talked about and taught.

The faithful mother exercises the utmost care that her little one is protected from extreme temperatures; that it is kept from exposure to infectious and contagious disease; that all possible safeguards are thrown about life and limb and she early begins mental and moral discipline. The signs of vicious temper, of cruelty to animals, or to its playfellows, are met with gentle firmness; the tendency to secretiveness and deceitfulness is discouraged, while by precept and example the child is guided aright.

PERFECT CHILDREN POSSIBLE.

Every mother has an ideal career for her offspring, and as the tastes and capacity of the child develop if they indicate capability in the desired direction, encouragement and aid in the way, perhaps, of toys, pictures and books are afforded; if the childish inclinations seem contrary to the hopes and wishes of the parents, counteracting influences are brought into requisition.

This is the beginning of what is termed excellent training or "bringing

up," and it may be followed with necessary modifications until the child attain to maturity, and yet the man or woman becomes a libertine or an outcast. The mother dies of a broken heart, feeling, perhaps, that Providence is unjust and unkind in its dealing with her, but not once questioning the fact that her whole duty has been done.

Under precisely the conditions I have mentioned I heard a mother complain of God and justify herself, saying, "I began his moral training when he was a baby, and as soon as he could walk and talk he was taught to pray."

She could not realize that she had begun too late the process of mind and morals building.

I wish I might impress all prospective mothers with a sense of the possibilities at their command. I do not believe that because Adam and Eve abused their privileges, and were turned out of Eden, every child is born into the world desperately wicked. To err is human, and although I admit the susceptibility of the heart to temptation, I believe it as possible for the prospective mother by the exercise of clean thoughts, pure desires and right purposes to lay a foundation which will develop the same in the nature forming under her tutorage, as by the use of proper foods, physical exercise and pure air to assure her offspring a strong, healthy physique. Science and culture have produced wonderful results in the floral and horticultural world, and may be as fittingly applied to the development and perfecting of the true as the beautiful. It is as possible for a child to come into the world possessed of the germs or honor, sobriety, truth and uprightness, as with a beautiful face and well developed body. Even the edict that "The sins of the father shall be visited upon the children" may be robbed of its terrors, for inherent vice may be overcome by especial care on the part of the mother in that direction.

HOW TO OVERCOME THE SINS OF PARENTS

The true artist has his ideal constantly in mind by day; he dreams of it at night, and it is his inspiration; but for which his work when complete would be meaningless, cold. How much more does she who is to give to

the world a life that shall make or mar the happiness of others, a soul that must be immortal, need the inspiration of an ideal, good and pure as well as beautiful!

That mothers-to-be should dwell in an atmosphere of tenderness and love has long been conceded; but the prevalent idea that they should be indulged and thus encouraged in outbursts of temper, fits of jealousy, envy, covetousness, and other undesirable qualities which often assert themselves to an unusual degree under such conditions, is wrong. This is the time of all times when such sentiments should be overcome. I have no doubt that the greater number of the world's professional thieves might truthfully assign their evil propensity to abnormal covetousness on the part of their mother before their birth, rather than to thieving ancestors! I believe, too, that were it possible to trace the worst cases of hopeless insanity to first causes they would be found in ungoverned rather than ungovernable temper in the mother.

There is no limit to the evil a mother may entail upon her unborn child; while on the other hand it is impossible to picture the happy results her efforts may accomplish.

That a mother may, during the period of gestation, exercise great influence, by her own mental and physical action, either unwittingly or purposely in such a way as to determine the traits and tendencies of her offspring, is now a common belief among all intelligent people. Few, however, have any definite understanding of the process by which such results are effected, or conception of the extent to which this process may be controlled.

The assertion has been made that "it is for the mother, by the use of appropriate means to produce a poet, a thinker, an artist, an inventor, a philanthropist, or any other type of manhood or womanhood, desirable or undesirable, as she will."

An author, Dr. Brittan, who has given much study to the occult problems of human life, gives the following facts:

"A woman, who, during the period of gestation, was chiefly employed in reading the poets and in giving form to her day-dreams of the ideal

world, at the same time gave to her child large ideality, and a highly imaginative turn of mind."

Some time since we met with a youth who had finely molded limbs and a symmetrical form throughout. His mother has a large, lean, attenuated frame, that does not offer so much as a single suggestion of the beautiful. The boy is doubtless indebted for his fine form to the presence of a beautiful French lithograph in his mother's sleeping apartment, and which presented for her contemplation the faultless form of a naked child.

HOW TO PRODUCE A POET OR A PHILANTHROPIST

A striking fact, in further illustration of the same law, is given by the author of a valuable book entitled "Husband and Wife."

It is to this effect: A teacher in a western state had under her instruction five children belonging to one family. The two eldest were dull, inert, and slow to learn; while the third, a girl about twelve years of age, was remarkably bright, sensitive and talented. Not only apt and quick at her lessons, she possessed a fine poetic temperament, accompanied by a keen appreciation of the beauties of nature; she could also write a theme in prose or verse with ease and facility.

The children younger than this one were both physically and mentally superior to the two eldest, but far inferior to her in talent and refinement of manners. These differences were so marked that the teacher's curiosity was excited to learn the cause.

Becoming intimately acquainted with the mother (who at first could assign no reason for the diversity), the teacher at length ascertained the following facts: Some months prior to the birth of the favored child, the mother (who, though reared in an eastern state, in the enjoyment of fair advantages, had become the wife of a farmer in a new country, deprived of literary and social privileges, and overworked in the struggle to acquire a competence) had her attention attracted to a volume of Walter Scott's poems, brought to the house by a canvasser; and she was so seized with a desire to possess and read the book, that, not having at hand the money to purchase it, she had walked four miles at night to borrow of a friend

a sufficient sum for the purpose. "And a glorious time I had in reading it," she said; "for often in the perusal of its pages I forgot my fatigues and cares." Having read the book so often that she came to know much of it by rote, she used to sing the songs to the child when an infant, and afterward to repeat the stories to her when a little girl. Here, no doubt, was the source of the superior intelligence, refinement and poetic tendencies of the child.

Every observant teacher could doubtless bear witness to the same general facts, and it would be easy to fill a volume with testimonies from various sources illustrative and confirmatory of the law under discussion. Such facts seem to establish beyond question the conviction that the mother has it largely in her power, by the use of suitable means, to confer on her child such a tendency of mind and conformation of brain as shall not only facilitate the acquisition of knowledge in any specific direction, but make it morally certain that such knowledge will be sought and acquired.

And if this is true in respect to ordinary intellectual abilities and physical features, it must be equally true in regard to extraordinary mental gifts —the qualities of genius of every type—and of all moral dispositions and spiritual tendencies as well.

But it will be noted that in the cases thus far narrated, the moulding power appears to have been exercised merely by accident or chance; that is, without any intelligent purpose on the part of mothers to produce the results that have followed.

HOW TO MOLD THE UNBORN CHILD

Can there be any doubt that the same or similar means, if purposely and wisely adopted, and applied with the greater care and precision which enlightened intention would secure, would produce under the same law, even more perfect results, and is it not true that an intentional direction of the vital or mental forces to any particular portion of the brain will cause a development and activity in the corresponding portion of the brain in the offspring?

If we accept the theory of modern phrenology, and regard the brain as made up of a congeries of organs, which are the instruments of distinct faculties of the mind or soul, it follows that if the mother during gestation maintains a special activity of any one organ, or group of organs, in her brain, she thereby causes a more full development of the corresponding organ or group in the brain of the fœtus, and thus determines a tendency to special activity of the faculties of which such organs are the instruments, in the child. Further, it is plain that if any one organ or faculty may be thus cultivated before birth, and its activity enhanced for life, so may any other or all.

POWER OF MIND OVER MATTER

It then is clearly within the bounds of possibility that a mother, by pursuing a systematic and comprehensive method, may give a well-rounded and harmoniously developed organism to her child—and this, notwithstanding even her own defects.

In this way may ancestral defects and undesirable hereditary traits, of whatever nature, or however strong, be overcome, or in a good degree counterbalanced by giving greater activity to counteracting tendencies; and in this way, too, can the coveted gifts of genius be conferred.

CULTURE BEFORE BIRTH

And since it is on the activity, or the lack of it, of the several faculties and propensities of our nature that the characters of individuals depend—their loveliness or deformity, their morality or immorality, their success or failure in life, their happiness or wretchedness here and hereafter—and since the welfare and progress of humanity as a whole is determined by the characters of individuals—and since, again, the tendencies for good or evil inwoven into the very woof and texture of the embryo evidently have greater power in shaping the characters and acts of individuals than all the training and discipline of childhood and youth—this matter of culture before birth assumes an importance far above that which pertains to any and all other departments of education.

LIKE BEGETS LIKE

Every one can readily understand that any oft-repeated exercise of muscle or of mental faculty (unless over-done) tends to develop and strengthen such muscle or faculty. It does this in the mother, and, if the law of fœtal moulding has been correctly stated in the foregoing pages, it must have the same effect through the mother upon the embryo.

For example, if the mother (at the proper stage in pregnancy) takes care to exercise her own muscles freely by walking, light gymnastics bathing, etc., the probabilities are, other things being favorable, that she will thereby not only improve her own health, but at the same time confer upon her child a vigorous muscular system. If she, at the proper time, exercises her mind somewhat persistently, for example, in reckoning or calculating numbers, she will thereby increase her own arithmetical faculty, and simultaneously increase the molecular deposits in that part of the fœtal brain which is the organ of calculation, according to modern phrenology—at all events will be likely to confer upon her child the power to become a good arithmetician.

If the mother spends any considerable portion of her time in philosophic study or thought, in efforts to understand the "whys and wherefores of things," she thereby exercises and expands her own cause-discerning faculty (Causality), and insures its activity in her offspring. So, if she practices thoughtful and unselfish kindness toward those about her, and is benevolent to the needy and suffering, she enstamps the same noble trait (Benevolence) upon the unborn; and if she at all times firmly adheres to the right because it is right, she keeps her own conscience ever clear, and imparts to the coming one that priceless quality, Conscientiousness. So of all the other faculties.

IMPARTING THE PARENTS' CHARACTERISTICS

Where any one faculty or tendency is in excess of a well-balanced character, in either of the parents, and deficient in the other, it may reasonably be expected that the excess on the one side may be counterbalanced

by the lack on the other—except when, as is sometimes the case, one parent overwhelmingly predominates over the other in imparting the characteristics of the child—a result due, perhaps, to the possession of greater physical or mental vigor at the time of inception.

Where the same faculties or tendencies are in excess in both parents, the probabilities are that the excess will be increased in the offspring to the extent, perhaps, of creating a deformity, or an undesirable one-sidedness of character. In such a case, the propriety of restraint, instead of culture, would seem to be apparent.

But it is suggested that such restraint may best be sought indirectly; that is, by special efforts to cultivate and exercise the opposite or counterbalancing faculties, rather than to attempt repression by direct exercise of the will on the excessive tendency. For example, should the selfish proclivities or passions tend to inordinate activity, endeavor to cultivate and exercise more fully the faculties classed as Directive and Regulative—that is, the Reasoning powers, the Conscience and Benevolence. This will be leveling up instead of down, thus making more of the whole man or woman by enlarging the better side.

Besides, it is probable that fixing the mind upon any particular faculty or propensity, in an effort to repress its action by direct will-force, may tend, by sending the vital fluids to the cerebral organ of such faculty, to increase rather than diminish its activity; whereas, the drawing of these fluids to other parts of the brain, by increasing the activity of the latter, will naturally lessen the action in those which it is desirable to repress. This, doubtless, furnishes the reason why efforts to overcome inordinate appetites by force of will are so seldom successful.

Where deficiencies exist in the same faculties in both parents, of course there will be required more assiduous attention to the means of culture by the mother, if she would have these deficiencies supplied, and her offspring saved from the disabilities and misfortunes that are likely to result.

KNOW THYSELF

If the foregoing suggestions are at all in the right direction, it plainly follows that it behooves all prospective parents, and especially mothers,

who would confer upon their children healthful and well-balanced organisms, to first thoroughly know themselves. Not only should they intelligently understand their own respective physical conditions, as regards healthfulness, adaptation of temperaments, constitutional tendencies, etc., but also they should have a just estimate of their own mental powers and moral characteristics in all particulars. And since few persons are competent to know themselves accurately in either of the above named respects, it is well to consult with intelligent and judicious friends, or with competent professional advisers, if such can be found, who are skilled in the detection of physical, mental and moral characteristics, and will faithfully point out both defects and redundances. It may be true that there are few persons now to be found in any of our communities who are fully qualified to give needed advice in these momentous matters; but it is believed that as public attention shall be turned in this direction, and the want become felt, such advisers will appear.

The specific measures which seem adapted to the several successive stages into which embryo culture may be divided, in accordance with the suggestion already made regarding an orderly method of procedure.

FIRST STAGE OF PRE-NATAL CULTURE

It seems scarcely to admit of question that the first thing to be done, in the order of time, is to secure to the new immortal the basis of a good physical organization, with strong vital powers. If the parents, and especially the mother, have given proper attention to their own personal preparation in all respects, as hereinbefore suggested, a good beginning will have been made. But the mother should endeavor by all means to maintain throughout the whole period of gestation the best possible condition of bodily health and vigor. Neither too much labor nor care, nor too little, should be undertaken. During the earlier months, while the foundations, so to speak, of the child's physical constitution are being laid, open air exercise, gymnastics, bathing, riding, travel, with the best diet, proper dress, cheerful companionship—in short, everything that will contribute to the highest physical vigor—should be availed of as far as

practicable. At later stages a greater amount of repose and seclusion is naturally sought, and travel and the more active forms of exercise cannot so well be participated in.

During the earlier stages of pregnancy, as well as at all subsequent periods, it is desirable that the mother have at hand, for frequent contemplation, some of the best works of art, in statuary, or pictures, or both, as models of the beautiful and graceful in form, and of the amiable and noble in expression. Perhaps some one admired figure may be chosen, to be copied by the mother's wonderful electrotyping power in her living work of art; but care should be taken that it be one in which goodness as well as physical beauty is bodied forth.

In this is to be found one of the noblest uses of art; and there can be no doubt that the works of the great masters have had more effect than the world imagines in producing and multiplying forms of beauty and manliness through impressions made on the minds of matrons.

HOW THE FACES OF MADONNAS ARE REPRODUCED

It is said that travelers in Italy, that land of paintings and sculpture, are often struck with the frequency with which the lovely features of the Madonna are to be seen in the faces of children of even the uncultured peasantry. When it is remembered that almost every church and chapel in that country is provided with a representation of a Virgin and Child, from the hand often of some master of the noble art, and that these pictures are regarded with devout reverence by the common people, it is easy to see whence come those beautiful faces of Italian children.

The several specific instincts or propensities of the Vital and Self-Preservative group, included in our first class, are, according to the phrenological system, termed as follows: 1. Vitativeness, or love and tenacity of life; 2, Alimentiveness, desire for and enjoyment of food; 3, Destructiveness, or executive power, ability to overcome obstacles; 4, Combativeness, or self-defense; 5, Acquisitiveness, or disposition to own and accumulate; 6, Secretiveness, tact, ability to keep one's own counsel.

This analysis and these definitions, let it be remarked, may be neither

strictly accurate nor exhaustive, yet they may answer practical purposes until better can be furnished. And the same remarks apply to all the groupings and definitions to be hereafter given. The phrenological analysis of instincts and faculties is used here, not because it is entirely satisfactory, but because it appears better adapted to the purpose in view than any other which meet with common understanding.

It should be noted that none of the propensities above specified, when rightly defined, can be dispensed with in a fully rounded character. They are not evil in themselves, nor are their organs (if such exist) "bad organs," as some have supposed. It is their overplus, or over-action as compared with that of others, that is bad. A deficiency in any one of these basic instincts of human nature constitutes in that particular a weak and deficient character.

SECOND STAGE OF PRE-NATAL CULTURE

Next in order after the vital instincts, and to some extent simultaneous with them, comes the development of the domestic and social affections, or the loves. These precede, in a general way, the manifestations of intellect. That is, the child ordinarily loves before it reasons to any extent. It would seem appropriate, therefore, that the mother, before applying herself to special exercises for intellectual culture, should see to it that any deficiencies that may exist in the affectional department are provided against, as far as may be, by appropriate self-training. If her own personal affections are kept in lively and well-balanced exercise, she may expect that her offspring will be well endowed in this department.

The several divisions of the affectional group of faculties recognized by phrenologists are the following: 1, Amativeness, or attachment to the opposite sex; 2, Conjugality, desire to pair, or love for the partner; 3, Parental Love (philoprogenitiveness), or love of children and pets; 4, Adhesiveness (friendship), attachment to friends; 5, Inhabitiveness, love of home and country.

THIRD STAGE OF PRE-NATAL CULTURE

Next in natural order of prominent activity, appear to come the observing or perceptive powers, intimately associated with which are the com-

municative and the retentive or recording faculties. These, as designated by phrenologists are: 1, Individuality, or power to individualize or distinguish and separately observe objects (the investigating faculty); 2, Form, or perception of shapes, outlines, memory of faces, etc.; 3, Size, the power to notice and remember dimensions; 4, Weight, or perception of forces; 5, Color, appreciation and love of colors, tints, etc.; 6, Order, love of arrangement, system; 7, Calculation, or perception of numbers and their relations (the arithmetical faculty); 8 Eventuality, memory of events, facts, dates, etc. (the historic faculty); 9, Locality, observation and memory of places, scenery, directions, etc. (the geographical faculty); 10, Time, sense of duration capacity for punctuality; 11, Tune, the musical faculty; and 12, Language, or the power of verbal expression. To these are closely related the five external senses—feeling, seeing, hearing, taste and smell.

Deficiency in any one of these faculties is not desirable—in some it is a sad misfortune.

Exercise for the culture of the observing and perceptive faculties, it is suggested, may properly commence about the third month; and it is repeated that special attention should be given to those which are lacking, or which are least inclined to spontaneous exercise, in the mother, or in both parents.

Aids in the systematic culture of these faculties may doubtless be obtained from modern elementary works on object teaching for primary schools and kindergartens. The defects of such works, or perhaps their entire absence, may be readily supplied by intelligent mothers, when they once understand the thing to be done, and its importance.

FOURTH STAGE OF PRE-NATAL CULTURE

The next group of faculties, in order of normal development in life, embraces what have been termed the constructive and beautifying powers, sometimes designated as the semi-intellectual group. These in phrenological parlance are named: 1, Constructiveness, or ingenuity (the building and mechanical faculty); 2, Ideality, love of the beautiful and refined (the

poetical faculty); 3, Sublimity, sense of the grand and sublime; 4, Mirthfulness, or love of pleasantry, wit. Under the same general division may be classed: 5, Imitation, or the power to copy, represent, mimic; and 6, Suavity, or agreeableness, blandness.

Closely associated with this group are also the Reasoning and Reflective, and the Moral and Regulative faculties, all of which may be classed together as the Directive and Regulative group. These include what are phrenologically termed: 1, Causality, or power to apprehend first principles, to trace causes, etc.; 2, Comparison, or power to analyze, classify, and generalize; 3, Human Nature, or sagacity in discernment of character; 4, Cautiousness, or prudence; 5, Continuity, power of consecutiveness or application; 6, Approbativeness, regard for the good opinion of others, ambition; 7, Self-Esteem, or self-respect; 8, Conscientiousness, love of right and abhorrence of wrong; and 9, Firmness, or perseverance.

Nothing need be said, to any intelligent reader, as to the importance of each and every one of these faculties, in due exercise, to the formation of a well balanced or perfect character; and the proper methods of their culture, respectively, are to some extent suggested by the names given them.

Special exercises for the development in the fœtus of the brain organs through which these faculties may manifest themselves, would seem to be in order after those adapted to the preceding group—say about from the fifth to the seventh month.

FIFTH STAGE OF PRE-NATAL CULTURE

In the last and highest group of human faculties—last and highest whether considered with reference to their value in human character, or the period at which they ordinarily arrive at maturity in the individual and in the race—we find what may be classed as the Humanitarian or Beneficent, the Religious or Worshipful, and the Aspirational, Spiritual, or Upward-Looking powers. These are designated as: 1, Benevolence, philanthropy, or universal love; 2, Veneration, reverence or worship; 3, Hope, or cheerful expectancy; 4, Spirituality aspiration, prescience, faith,

or power to apprehend spiritual realities, and to lay hold on unseen verities.

These constitute, indeed, the crowning attributes of human nature. No character can be regarded as complete and symmetrical in which they are not in full and harmonious exercise. If any of this group, as of the preceding, are deficient in either parent, the expectant mother cannot discharge her full duty to the unborn unless she make earnest efforts to supply the deficiency by self-culture before its birth. The definitions of the several faculties as given above will suggest the nature of the exercises by which such culture may be attained.

While the faculties of this group should unquestionably be at all times kept in full exercise for the parent's highest good, yet their special culture may well occupy attention during the final weeks of the gestatory period —say from the seventh to the ninth month, inclusive.

THINGS TO BE AVOIDED DURING PREGNANCY

The prospective mother, in her efforts to improve herself and to worthily endow her offspring, should by all means avoid anxiety, overcarefulness, an oppressive fear of mistake, and a painful sense of duty. These feelings would tend to enstamp upon the coming one an overanxious, foreboding, painfully-careful disposition, than which hardly a greater evil can be entailed. On the contrary, everything should be done with a cheerful delight, because its purpose is to confer blessings on an object of the tenderest affection, and it should be done with a joyful confidence as to the result. No greater blessing can be conferred than that of a cheerful, hopeful, helpful disposition, that delights in bestowing good upon others, and that meets all the vicissitudes of life with a calm trustfulness. And there can be no doubt that such characteristics are determined in a large degree by the mother's state during gestation.

It hardly seems necessary in this connection to advert to the importance of avoiding all exercise of malevolent feelings, such as anger, envy, jealousy, hatred, revenge, covetousness, or wrong desire of any nature, since all readers of the foregoing pages must understand the danger that

such emotions, if indulged, may implant in the embryo the subtle germs from which will grow in after years the bitterest fruits.

Another thing important to be avoided, as far as practicable, by the mother, is the presence of disagreeable and unprofitable associates of either sex. The untoward mental and moral influence that may be excited through the mother upon the forming child, by the frivolous and unseemly conversation of persons unappreciative of the nobility and grandeur of the work which occupies her.

Fadeless renown has crowned the efforts of gifted sculptors to portray the perfect ideal of the "human form divine." That field of high art is open to comparatively few competitors—those fortunately endowed with rare genius. But there is a field of higher art, worthy of still greater honor—as much greater as the living perfect man is better than a senseless image. And this field is open to almost every one, even the humblest, through the means set forth in the foregoing chapter. Yes! the god-like privilege is brought within the reach of the great mass of those now entering the prime of manhood and womanhood, as well as of those who have not yet passed its noon-time, of endowing with the noble gifts of genius their own sons and daughters, however lowly born.

CHAPTER XIII

CHILDBIRTH AND HOW MADE PAINLESS

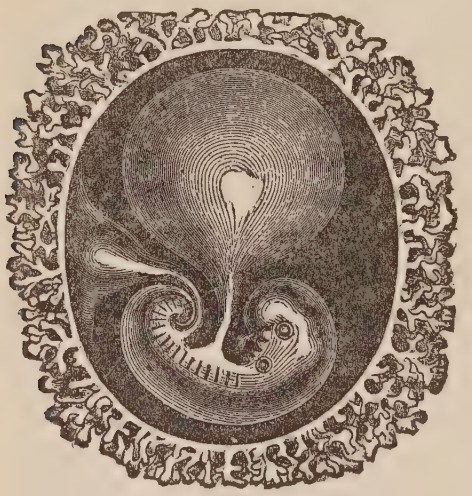
PAINLESS childbirth is an established fact. It was prophesied fifty years ago, by eminent physicians, that the time was coming when painless childbirth would become an established fact. Mrs. Elizabeth Cady Stanton has voiced it from the platform for many years. In a lecture to ladies, she thus strongly expresses her views regarding maternity and painless parturition: "We must educate our daughters to think motherhood is grand, and that God never cursed it. And that the curse, if it be a curse, may be rolled off, as man has rolled off the curse of labor, by labor-saving inventions; and as the curse has been rolled from the descendants of Ham. My mission among women is to preach this new gospel. If you suffer, it is not because you are cursed of God, but because you violate His laws. What an incubus it would take from woman, could she be educated to know that the pains of maternity are no curse upon her kind. We know that among Indians the squaws do not suffer in childbirth. They will step aside from the ranks, even on the march, and return in a short time, bearing with them the new-born child. What an absurdity, then, to suppose that only enlightened Christian women are cursed.

"But one word of fact is worth a volume of philosophy; let me give you some of my own experience. I am the mother of seven children. My girlhood was spent mostly in the open air. I early imbibed the idea that a girl is just as good as a boy, and I carried it out. I would walk five miles before breakfast, or ride ten on horseback. After I was married, I wore my clothing sensibly. The weight hung entirely on my shoulders. I never compressed my body out of its natural shape. When my first four children were born, I suffered very little. I then made up my mind that it was totally unnecessary for me to suffer at all; so I dressed lightly, walked every day, lived as much as possible in the open air, ate no condi-

ments, and took proper care of myself. The night before the birth of the child I walked three miles. The child was born without a particle of pain. I bathed it and dressed it myself, and it weighed ten and one-half pounds. The same day I dined with the family. Everybody said I would surely die, but I never had a moment's inconvenience from it. I know this is not being delicate and refined, but if you would be vigorous and healthy, in spite of the diseases of your ancestors, and your own disregard of nature's laws, try it."

KNOWLEDGE DERIVED FROM EXPERIENCE

Dr. Holbrook says: "Those women of savage nations who bear children without pain, live much in the open air, take much exercise, and are physically active and healthy to a degree greatly beyond their more civilized sisters. These instances tend directly to prove that parturition is likely to be painless in proportion as the mother is physically perfect, and in a perfect condition of health. They certainly tend even more strongly to prove that pain is not an absolutely necessary attendant of parturition."



HUMAN EMBRYO AT THE THIRD WEEK.

Observation teaches us that all animals which are left to instinct and nature, bring their young into the world without suffering.

We do not wish to combat any established methods of treatment which add to the welfare of mankind, but we heartily invite the co-operation of all progressive and practical thinkers of any school. With us, this knowledge is derived from experience, and not from undigested, undefined theories. Our object is to avert that suffering known only to woman in time of labor.

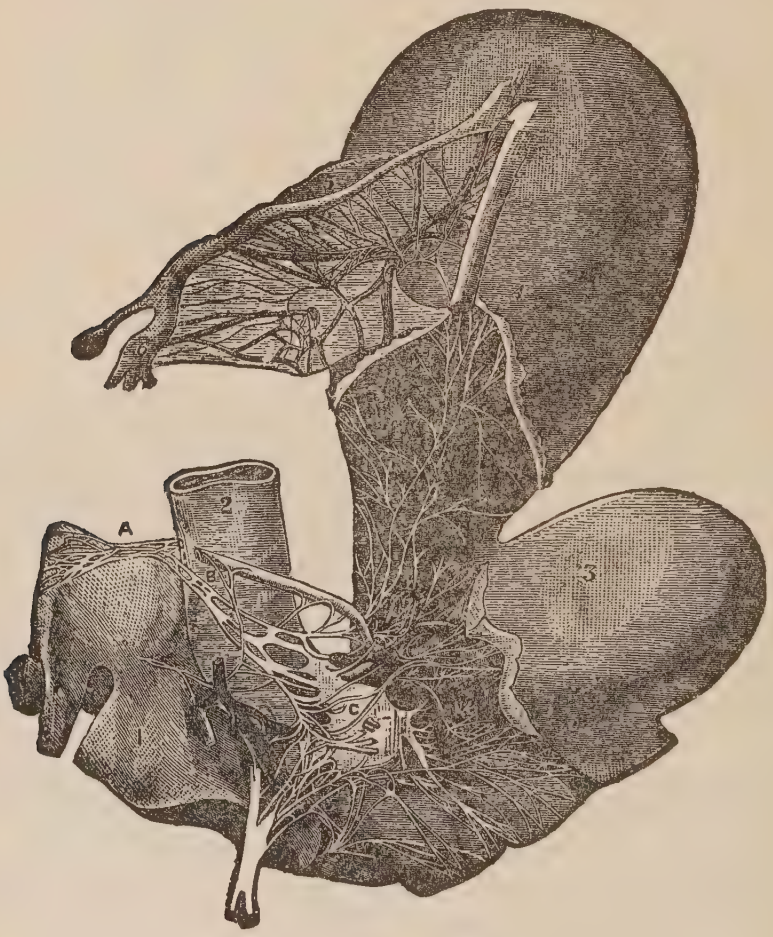
WHAT TO EAT DURING PREGNANCY

The diet for the mother, while carrying a child, should be wisely considered. Set rules cannot be followed. A mixed diet is best, including cereals, vegetables and fruits in plenty. Of meats, eat sparingly. If it is no self-denial to do without meat, then eat none; there is greater ability for mental and physical endurance and greater fortitude without than with a meat diet; this fact will sometime be universally recognized. There are ancient nations—non meat eating—whose great endurance demonstrates this fact, showing that the necessity for animal food is entirely a matter of education. The change from meat, however, must be gradual, for so long as the mind thinks the meat diet necessary, the necessity exists; since the mind exercises great influence and control over the body. No change should be abrupt. Women, except among the rich, in some of the European countries, eat very little meat. In Ireland, women of the poorer class live on a diet of potatoes and cabbage, and their confinements are only from one to three hours in duration, with very little pain; in some cases, no pain whatever is experienced.

If a person is very fleshy and warm-blooded, lemonade and juices of berries and fruits are good; if lean and thin, oatmeal water and rice water make nice drinks, also coffee and tea moderately used. Care must be observed in not eating too much, thus causing fatigue. A little food well digested is better than a great deal not digested. If the system is in good condition, there will not be a particular longing or craving for any certain food, but if abnormal, then fancies will be marked. If a mother is very fleshy, she should reduce somewhat by bathing and a very nutritious diet, not using much sweet food, eating carefully and in small quantities.

A very thin person should eat farinaceous food and cream, vegetables, fruits and nuts, avoiding all sweets. It has been the thought with some that sweet food makes fat. The sweets cause acidity of the stomach; this produces an acid state of the blood which prevents the increase of fat and muscle. Pastry, cake, and canned fruits which contain a large amount of sugar, should be avoided by the pregnant woman. Soups are very good, and should be eaten at the beginning of the meal.

Some women, when pregnant, have excessive appetites, eating as much at one meal as formerly accustomed to eat in two. Such women have large children, often weighing from twelve to fourteen pounds at



NERVES OF THE UTERUS.

1, sacrum; 2, rectum; 3, bladder; 4, uterus; 5, ovary; 6, extremity of fallopian tube.

birth. These excessive appetites should be controlled. Leave the table a little hungry, and in less than twenty minutes the craving for food will cease, and the general feeling will be much improved; as a result, the

child will not be so large. The pregnant woman cannot drink too much water, since much extra fluid is demanded by the system; hot water is best if she enjoys it. The solid food should be well masticated and mixed with saliva.

The practice of deep breathing should be cultivated and encouraged daily, during all the months of gestation. The extra air breathed will form a substitute for a portion of the solid food otherwise craved. It has not been generally taught, nevertheless it is a great and most valuable physiological truth, that the air we breathe is as necessary to the building of tissue and muscle as solid food. The breathing exercise will also be a most excellent additional preparation for the day of confinement.

A person must attend well to cleanliness so as to eliminate all impure secretion that tends to the surface. This helps to purify the blood and strengthen the muscles. A very fleshy person can use water freely, and any kind of baths are of benefit. But a very thin and delicate person must use oils; any of the vegetable oils will do. Rub the oil well into the skin, then take a piece of flannel or a Turkish towel and rub until the skin is dry and soft. This makes a person feel strong and vigorous. This rule applies to children as well. The oils should be used twice a week in a warm room.

We advocate the hot baths, using water, steam or Turkish. A warm sitz-bath, taken just before retiring, and the bowels and back well washed with pure soap, will be very beneficial twice a week, for two months before childbirth.

I am acquainted with a number of ladies who used the Turkish or Russian baths during the entire nine months of gestation, with the most gratifying results. One of them had just time to reach home from the bath when the child was born; there was no opportunity for the family physician to arrive in time. She was the mother of five children. Attend well to the feet by bathing them at least every other night, on retiring. If troubled with habitually cold feet, dip them alternately first into a pan of hot water, then into cold; repeat this several times before wiping them

dry. This practice will soon establish the condition of permanently warm feet, an important aid to good health.

A BOON TO WOMEN

The system here introduced is not new. It is known and has been practiced in various parts of Europe for a hundred years. I acquired the knowledge from one whose memory is sacred to me; who herself was the mother of eight large children, all born under the treatment that will be herein set forth. Her health remained unbroken, free from any weakness or injury from the many confinements she had passed through. The system is perfectly safe in the hands of the unprofessional. It is often the case in country places that the only dependence of the about-to-be-mother is upon the kind offices of a neighbor or friend.

This system is a boon to every woman in the land. It in no way interferes with the physician; on the contrary, it relieves both him and the patient of much anxiety, comforting her through the months of waiting, and relieving her mind of that terror and dread of confinement now so universal. It is a blessing come to woman, a system born of nature, soothing and refreshing. It eliminates all morbid accumulations and secretions, establishing a general equilibrium.

Many who have had their first child under this system have remarked: "Why, I could have another and not feel tired." Others, who in previous confinements have been ruptured and lacerated, and cautioned not to become pregnant again, afterwards pass through their confinements as safely as though former accidents had not occurred. The harmful tension at birth is caused by lack of right knowledge on the part of the patient. This injurious tension we remove. The relaxation of the nervous and muscular system is in perfect harmony with nature.

In 18— the idea of painless parturition was first advanced, in a small pamphlet, published by a Mr. Brown—a chemist, of London. His wife, in two previous confinements, had been a great sufferer, and he feared she would not survive the third.

"She had, within three years, given birth to two children, and not only

suffered extremely in the parturition, but for two or three months previous to delivery her general health was very indifferent, her lower extremities exceedingly swollen and painful; the veins so full and prominent as to be almost bursting; in fact, to prevent such a catastrophe, bandages had to be applied; and for the last few weeks of gestation, her size and weight were such as to prevent her attending to her usual duties. She had on this occasion, two years and a half after her last delivery, advanced full six months in pregnancy before she commenced the experiment at her husband's earnest instance; her legs and feet were, as before, considerably swollen; the veins distended and knotty, and her health diminishing.

THE FRUIT DIET

"She began the experiment in the first week of January, 18—. She commenced by eating an apple and an orange the first thing in the morning, and again at night. This was continued for about four days, when she took just before breakfast, in addition to the apple and orange, the juice of a lemon mixed with sugar, and at breakfast two or three roasted apples, taking a very small quantity of her usual food, viz., wheaten bread and butter. During the forenoon she took an orange or two, and an apple. For dinner she took fish or flesh in a small quantity, and potatoes, greens and apples; the apples sometimes peeled and cut into pieces; sometimes boiled whole with the potatoes; sometimes roasted before the fire, and afterward mixed with sugar. In the afternoon she sucked an orange or ate an apple or some grapes, and always took some lemon juice mixed with sugar or syrup. At first the fruits acted strongly on the stomach and intestines, but this soon ceased, and she could take several lemons without inconvenience.

"For supper she had again roasted apples or a few oranges, and rice or sago boiled in milk; sometimes the apples, peeled and cored, were boiled along with the rice or sago. On several occasions she took for supper apples and raisins, or figs with an orange cut among them, and sometimes all stewed together. Two or three times a week she took a teaspoonful

of a mixture made of the juice of two oranges, one lemon, half a pound of grapes, and a quarter of a pound of sugar.

"She continued in this course for six weeks, when, to her surprise and satisfaction, the swollen and prominent state of the veins, which existed before she began, had entirely subsided; her legs and feet, which were also swollen considerably, had returned to their former state; and she became so light and active she could run up and down a flight of more than twenty stairs, with more ease than usual when she was perfectly well. Her health became unwontedly excellent, and scarcely an ache or a pain affected her up to the night of her delivery. Even her breasts, which, at the time she commenced the experiment, as well as during her former pregnancies, were sore and tender, became entirely free from pain, and remained in the very best condition after her delivery also, and during her nursing."

He continues: "At nine o'clock, after having cleaned her apartments, she was in the adjoining yard shaking her own carpets, which she did with as much ease as any one else could have done. At half-past ten she said she believed her 'time was come,' and the nurse was sent for. At one o'clock the child was born.

THE FOURTH DAY AFTER CONFINEMENT

"She got up from her confinement immediately, and well. After her previous delivery, full ten days elapsed before she could leave her bed, and then swooned at the first attempt; on this occasion, she left her bed the fourth day and not only washed, but partly dressed herself. Had she not been influenced by custom and somewhat timid, she might have done so sooner. To be assisted appeared like a burlesque to her, not to say annoyance. She had no assistance from medicine."

A friend of my acquaintance said that from the first moment that she thought she was pregnant, she lived on entire wheat bread, vegetables and fruit, sago, tapioca, rice, young meat, and drank lemonade, said she never had an hour of nausea, or discomfort during her pregnancy; had so easy a labor that she thought it not worth dreading.

Many cases might be shown here were it necessary, but those already quoted are sufficient to show what correct living, healthful exercise, a fruit diet, deep breathing and proper confinement strictly adhered to, will accomplish, and the reader is earnestly requested to ponder well and follow closely the teachings of these pages.

OTHER ESSENTIALS FOR PAINLESS CHILDBIRTH

While the fruit diet alone will accomplish much and go far toward making labor easy to be borne, there are other essentials that should not be neglected. Bathing and exercise are powerful aids; indeed, they are co-partners in acquiring the desired result. The bathing should be thorough and of everyday occurrence. The body should be thoroughly sponged with tepid water each morning, and a cool, quick sitz-bath be immediately taken, followed by a brisk drying of the parts with a moderately coarse Turkish towel. The vaginal canal must be kept thoroughly cleansed by tepid douche baths, and in the last days of pregnancy, both the sitz-bath and the vaginal douche should be taken warm, while in the early stages of labor, or in hard and lingering labors, they should be taken hot.

Daily exercise, thorough and systematic, is equally as important a factor as the diet and the bath. In pleasant weather gentle walks in the open air and sunlight should be taken. Care must be used that the patient, if delicate, be not fatigued. Thorough training, however, if begun in time will make the delicate woman strong, and the exercise which was before an effort will soon become easy and a pleasure; the strength required be but a tithe of that possessed. Light gardening cannot be too highly recommended, and where possible, is very beneficial. Housework at this time also comes in for a good share of attention, and ought not to be neglected. Care should be taken in this, as in all exercise and work, that there is no straining or heavy lifting, no running up or down stairs, no shocks, fatigue, or over-exertion.

A PERIOD OF HOME-MAKING

This is eminently a period of home-making, or nest building, and a woman's heart should never be lighter than when attending to the little wants that go to make home happy and a place of contentment and rest.

She should see that the ventilation is perfect, that the whole house is well aired, and especial care should be taken to banish all mustiness, dampness and impurities from the sleeping room. The air should be cool and pure; the sleep sweet and invigorating. The patient should retire early to bed and rest during the day when so inclined. The dress should be loose and the clothing hung from the shoulders. All pressure should be removed and the utmost freedom of action, both of body and limb, be secured.

HOW TO BREATHE PROPERLY

Exercise in deep breathing should be taken. Full breathing is necessary to thoroughly oxygenize the blood. "To learn deep breathing be as passive as possible; that is, assume a position in which all the voluntary motor muscles are inactive. Lie flat on the back, perfectly horizontal, without even an elevation of the head. Shut the mouth and draw the air in through the channel provided by nature, the nose. As a result of bad habits most persons will raise the upper ribs; yet this expansion will soon yield to the movement of the lower ribs, and this again will gradually cease by continual practice, as will also every distension of the ribs. All these faulty movements will be superseded by a bulging out of the abdomen, whose outward swelling will be proportional to the amount of air inhaled.

"Look at that quietly sleeping cat upon the rug. Its sole indication of vitality is the bellows-like motion of its body in breathing. You must also have observed, that in all domestic animals, at each respiration, an undulating motion extends quite through the whole trunk, and that this motion terminates only at the hindermost limbs. This is natural respiration as it is performed throughout quadruped existence.

"Have you a perfectly healthy lady friend? Lay your hand upon her

and you will find that the abdomen rises and falls in exactly the same way at every respiratory act; not only so, but this act is involuntarily performed in a more profound manner every few moments, and that this increased motion operates particularly upon the lowest portion of the trunk.

"Observe in the same way your own person. If you are an invalid you will find this motion diminished, perhaps suppressed. When half performed you only half live."

PERSONAL EXPERIENCES

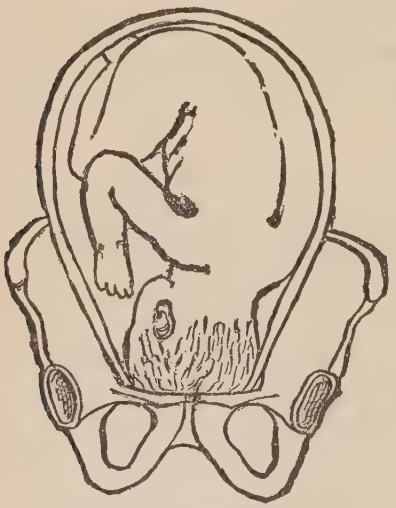
Before studying medicine with a view to its practice, and while I was yet but a young girl, living in the country where there was no physician in the neighborhood, I had some experience, a portion of which I will relate.

Mrs. W—, thirty-nine years of age, of low stature, thickset, fleshy, and of short breath, counseled with me in the beginning of her pregnancy. I found her in a state of mind bordering on desperation. I assured her that she had no trouble to apprehend; her fear, however, was not overcome until later. I recommended some appropriate books adapted to one in her condition, she read these and gave herself up to the higher wisdom. She kept away from such persons as would only depress her feelings and increase her anxiety, and in this way her mind was brought into a harmonious state. She grew to look forward with a fearless and strong heart to the fulfilment of her pregnancy, keeping uppermost in her mind the naturalness of child-bearing, and placing trust in the supreme wisdom that does all things well. When the time for her confinement came, I was called again. I gave the treatment I had learned to employ, relaxed her system with artificial heat, and she had an easy delivery, so easy as to cause her to remark that she would not dread to have another.

ON THE RIGHT TRACK

Since graduating from a medical college and taking up the practice as a profession, I find that I was, in my youth, on the right track, my present system being only an improvement on my early method.

The following is an extreme case. A single lady, twenty-seven years of age, had unsuccessfully attempted an abortion to save her reputation. She was very beautiful. Her occupation was that of sewing. The poisonous drugs she had taken produced the death of the fœtus, but not its expulsion. A great sufferer, she had lain in this condition six weeks, and was reduced almost to a skeleton. Two of the city physicians exhausted their skill on her, without success, and left her to die under the effects of opium. While in this dying condition, another lady physician and myself were called. I suggested the sweating process, in connection with hot water injections to the unrelaxing womb, keeping her, meanwhile, warmly covered. One hour after this treatment the entire system relaxed, including the os-uteri, expelling contents, which was a rotten mass of putrifaction. The odor of a dissecting room was nothing compared with this. Another injection, not so warm, with a few drops of carbolic acid, was given, when she fell into a sound sleep. The sack or bag of waters did not break until reaction set in, producing painless contractions. The free perspiration also eliminated all poisons which had been taken into the stomach, purifying the entire system of foreign matter. She recovered perfectly, free from the least indication of fever or blood poisoning, as would ordinarily be expected. One who had undergone a Turkish bath could not have reported more satisfactorily.



HEAD PRESENTATION.

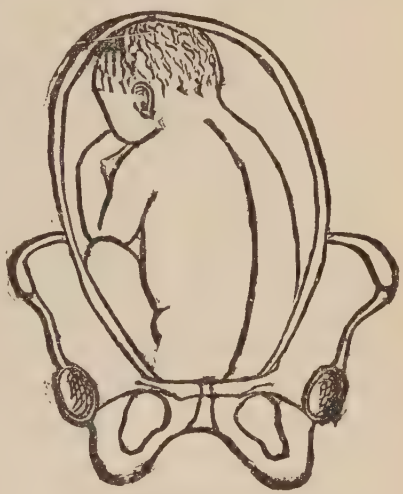
At another time, while visiting in Minneapolis, I was invited to a Woman's Hospital as counsel in a severe labor case. The woman had been in great suffering for two days, and, on examination, I found still no dilatation of the os-uteri. I suggested my usual course, which was

followed. In an hour and a half the child was delivered without pain, and there was a perfect recovery.

My obstetrical cases have been very numerous, but I have never lost a case, nor met with an accident.

FIRST STAGES OF LABOR

A day or two before the labor commences the patient usually feels better than she has done for a long time; she is light and comfortable; she is smaller, and the child is lower down; she is more cheerful, breathes more freely, and is more inclined to take exercise and attend to he household duties; she has often an inclination to tidy her drawers, and to look up and have in readiness her own linen, and the baby's clothes, and the other requisites for the long-expected event; she seems to have a presentiment that labor is approaching, and she has the feeling that now is the right time to get everything in readiness, as in a short time she will be powerless to exert herself.



BREECH PRESENTATION.

A few days, sometimes a few hours, before labor commences, the child "settles," that is there is a subsidence—a dropping of the womb—lower down into the abdomen These are the reasons why she feels lighter and more comfortable, and more inclined to take exercise, and why she can breathe more freely. The only inconvenience of the settling of the womb is, that the womb presses more on the bladder, and sometimes causes an irritability of that organ. The inclination to urinate becomes more frequent. Sleep is more broken by restlessness, and walking becomes more difficult. The woman becomes more clumsy, and a little later, glairy discharges take place from the vagina These simply show an increased

action of the mucous glands preparing for the final act of parturition. Finally there is the commencement of painless contractions; these, a little later on, become somewhat painful, this slight painfulness being only one of the signs. The mucus is more or less tinged with blood from the rupture of small vessels around the cervix, due to commencing dilatation and separation of the membrane—in the language of the lying-in chamber, "the show."

As the patient is about to give birth to the child, she should see that the bowels are evacuated, and if this is not accomplished naturally, a copious injection of warm water should be used. If constipation is very obstinate, an injection of slippery elm infusion with a little soap should be taken, in order to insure a free exacuation.

THE GREAT SECRET OF EASY CONFINEMENTS

In the early part of the first stage give warm tea, a cup every ten minutes, or as the case may require, inducing free perspiration. Have the room warm, with plenty of pure air. Attend to the feet and keep them warm. Pay attention to oiling the vagina and surrounding tissues with pure sweet lard, or unsalted butter. All handling or maneuvering, in the hope of bettering the process of nature, is uncalled for and injurious. Parts that are taxed by this process of nature quickly rally to a normal condition and tone, while unnecessary manipulation may subject them to serious injury and cause much after suffering. While the patient is taking the tea, she should pay special attention to extra breathing. Fill the lungs by inhaling through the nostrils, breathing as deeply as possible, and exhaling slowly in the same manner. Extra breathing increases the strength and endurance of the patient; all remedies act more forcibly, and, capillary circulation being increased, at the same time hemorrhages are prevented or cured. This will cause pressure where otherwise there would be pain, and I cannot impress it too vividly upon your minds.

Many suppose that perspiration is weakening; experience has proven to the contrary. Free perspiration removes all fear of fever and other unpleasant symptoms generally attending childbirth. The child and pla-

centa are delivered in from one to three hours at the longest, and the patient is left free from laceration, rupture, fevers, blood poisoning, and all the sequences so frequently following parturition. She suffers no pains, soreness, rigors, nor chills, when reaction takes place. Age is no hindrance to an easy and natural delivery. It will be as easy at forty as at

FŒTAL SURFACE OF THE PLACENTA.

The placenta is a soft spongy mass, nearly circular in form, measuring about seven and one-half inches in diameter and one inch in thickness at the insertion of the umbilical cord. Its weight is about one pound.

twenty years of age. Nothing less than a malformation of the pelvis can prevent a perfect delivery. In such a case, where surgical aid might be required, my treatment would still be of great assistance; it is invaluable in premature births, when the contents are large enough to give expulsive power.

DRESS FOR CONFINEMENT

When the time has come for the mother to give birth, she should put on a flannel wrapper over a clean nightgown. Flannel is a non-conductor

of heat, as the object of the treatment is to remove all tension of the nervous and muscular tissues, the retention of the heat becomes an assistant and also aids in dilating the os-uteri and surrounding tissues.

KEEPING CONTROL OF ONE'S SELF

She need not lie down to have her offspring, unless very strongly inclined so to do. One does not lie down to work. A kneeling position is most desirable for some women, holding for support to something in front of them; with others the sitting posture is easiest; move around and find the position that seems most comfortable. Many a mother has been sacrificed through the feeling that she must go to bed for the birth of her child. Nature at that time needs all the energy and assistance an intelligent mother can give. Do everything possible to assist; breathe deeply, hold a full breath, and by thus expanding the lungs, assist nature to bring forth her young.

After the child is born, the mother should lie down and have some gruel, broth, or a cup of tea. If the after-birth immediately follows the birth of the child, nothing more is required at the time. If it is retained, and when the mother is rested, the attending physician can remove it; this can easily be accomplished by an injection, into the vagina and rectum, of slippery elm infusion and pure soap, thus relaxing and loosening the parts and causing a natural and easy delivery. Keeping warm and paying attention to the breathing will prevent any unusual discharge of blood. The patient must possess perfect control of herself, realizing that it is natural to bear children.

THE CHILD'S CRY A RELIEF

After the expulsion of the child, it is better to turn its back to its mother, and let her covering fall between herself and the child, thus bringing it into full view, and completely protecting the mother from cold or exposure. A soft napkin should now be used to wipe the child's face, eyes and mouth. The child usually cries lustily as soon as it is born. The sudden contact with the air is exciting, and more or less irritating to the

exceedingly sensitive infant; the natural cry assists in establishing the new function of breathing. Be not disturbed at this first manifestation of external life through the seemingly painful cries, for the absence of these would give much more cause for alarm.

Let the child lie undisturbed for some five minutes, or until breathing is fully established. By that time, in most cases, the cord will have ceased to pulsate up to within about three inches of the child's body. It should then be cut about three inches from the abdomen. In one minute the flow of blood from the cord will have ceased, when the cord should be tied, with coarse silk or thread, about two inches from the abdomen. Should the cord seem large and tapering from the abdomen, it may be because a portion of the intestine is within it. In such case cut the cord beyond the extended intestine, return the intestine into the abdomen, and retain it there by a bellyband.

When a lady marries late in life—for instance, after she has passed the age of thirty—her first labor is usually much more lingering and tedious, demanding a great stock of patience from the patient, from the doctor, and from the friends; notwithstanding this, both she and her babe generally do remarkably well. Supposing a lady marries late in life, it is only the first confinement that is usually hard and lingering; the after labors are as easy as though she had married when young.

PREPARATIONS FOR LABOR

I should strongly urge a patient not to put everything off to the last. She must take care to have in readiness a good pair of scissors and a skein of thread. And she ought to have in the house a small bottle of

olive oil, and a cake of Castile soap, that they may be at hand in case they are wanted. Let everything necessary, both for herself and the babe, be well aired and ready for immediate use, and be placed in such order that all things may be found, without hurry or bustle, at a moment's notice.

The bed should contain a mattress and over this should be placed a rubber sheet. Over the rubber sheet should be placed linen ones. The patient can then use the bed if she chooses.

Many attendants are not only unnecessary but injurious. They excite and flurry the patient, they cause noise and confusion, and rob the air of its purity. The husband, besides the doctor and the nurse, is all that is needed.

CHLOROFORM IN HARD AND LINGERING LABOR

Mothers and doctors are indebted to Sir James Simpson for the introduction of chloroform, a great and valuable discovery.

The inhalation of chloroform, according to the will of the operator, causes either partial or complete unconsciousness, and, either for a longer or for a shorter time, freedom from pain. In other words, the effects might, with perfect safety, be continued, either for a few minutes, or from time to time, for several hours; indeed, if given in proper cases, and by a judicious doctor, with perfect safety.

Chloroform is useful in a labor when the throes are very severe, and when, notwithstanding the pain, the labor is making but little progress.

Chloroform ought never to be administered, either to a patient in labor or to any one else, except by a doctor. This advice admits of no exception. And chloroform should never be given unless in a lingering or a hard labor. As I have before advised, in a natural and easy labor, Nature ought not to be interfered with, but should be allowed to run its own course. Patience, gentleness, and non-interference are the best and the chief requisites in the majority of cases.

BRING LIFE TO A STILL-BORN BABE

If the babe should be born apparently dead, a few smart blows must be given on the thighs and on the back; a smelling bottle ought to be

applied to the nostrils; or a bit of cloth should be singed under the nose, taking care that the burning tinder does not touch the skin; and cold water must be freely sprinkled on the face. But after all, a good smacking on the thighs, in an apparently still-born babe, is the most handy, quick, and ready remedy. Thousands of apparently still-born children have, by this simple remedy, been saved from threatened death. If you can once make an apparently still-born babe cry—and cry he must—he is, as a rule, safe. The navel string, as long as there is pulsation in it, ought not to be tied.

ARTERIAL VESSELS IN UTERUS TEN DAYS AFTER DELIVERY.

BANDAGE AFTER LABOR

While we do not in this enlightened age consider it necessary to use a bandage after labor, yet there are those who prefer to do so, and in that case it should be made of thick linen, similar to sheeting, about a yard and a half long, and sufficiently broad to comfortably support the abdomen. Two or three folded diapers—folded in a triangular shape—should be first applied over the region of the womb, and then the bandage should be neatly and smoothly applied around the lower portion of the abdomen to keep the diapers firmly fixed in their position. The bandage ought to be put on moderately tight, and retightened every night and morning, or oftener, if it becomes slack.

Women who go about too soon after their confinements frequently suffer from falling of the womb. An abundance of exercise during pregnancy, and perfect rest for a few days after labor, cannot be too strongly advised.

DIET AFTER LABOR

For the first day the diet should consist of nicely made and well boiled Graham gruel, arrowroot, and milk, bread and milk, tea, dry toast and butter, or bread and butter; taking care not to overload the stomach with too much fluid. A cupful of either food should not be exceeded, otherwise the patient will feel oppressed; she will be liable to violent perspiration, and there will be a too abundant secretion of milk.

For the second day—Breakfast,—either dry toast and butter, or bread and butter, and black tea. Dinner,—either chicken or game, mashed potatoes and bread. Supper,—a breakfast-cupful of well-boiled and well-made gruel, made either with water or with fresh milk, or with equal parts of milk and water, or with water with a tablespoonful of cream added to it.

On the third and fourth days.—Similar diet to the second day, with this difference, that for dinner the patient should have mutton—either a mutton chop or a cut out of a joint of mutton, instead of the chicken or game. The diet ought gradually to be improved, so that at the end of four days she should return to her usual diet—providing it is plain, wholesome and nourishing.

THE TWILIGHT SLEEP

The Twilight Sleep is a new method of painless childbirth. Labor pains are overcome by the hypodermic injection of an anesthetic being known as Scopolamin-morphin, or as a proprietary remedy it is called Narcophin.

Authorities do not agree as to the merits of this method. Two Germans, namely, Drs. Kroenig and Gauss of Freiburg, Germany, first promulgated this method of treatment and they report remarkably favorable results. While some American physicians are using it in certain special cases scarcely any of them recommend it for promiscuous or universal use. Dr. A. L. Mann in the April issue of the Illinois Medical Journal, summarizes his analysis as follows:

"1. The treatment is not practical and will not be available for 99 per cent of the potential motherhood of the country. 2. Ninety-five per cent of the medical profession will be denied the privilege of using it in conformity with the essential (Freiburg) requirements. 3. It is admittedly dangerous to the child and in lesser degree to the mother also."

CHAPTER XIV

MISCARRIAGE AND ABORTION

A PREMATURE expulsion of the fœtus before the end of the sixth month is called either a miscarriage or an abortion; after this time, but before the full period of nine months, it is known as premature labor.

A miscarriage is a serious calamity, and should be considered in that light; not only to the mother herself, whose constitution frequent miscarriages seriously injure, and eventually ruin; but it may rob the wife of one of her greatest earthly privileges, the inestimable pleasure and delight of being a mother. As a miscarriage may generally be prevented, it behooves a wife to look well into the matter, and to study the subject thoroughly for herself, in order to guard against her first miscarriage; for the first miscarriage is the one that frequently leads to a series.

CAUSES OF MISCARRIAGE

A slight cause will frequently occasion the separation of the child from the mother, and the consequent death and expulsion of the fœtus; hence the readiness with which some women miscarry. The following are the most common causes: Long walks; riding on horseback, or over rough roads in a carriage; a long railway journey; over-exertion and sitting up late at night; too frequent sexual intercourse. The excitement incident to parties, balls and concerts; all violent emotions of the mind, passion, fright, etc.; fatigue; over-reaching; sudden shocks or falls; taking a wrong step either in ascending or in descending stairs; falling down stairs; lifting heavy weights; violent drastic purgatives; calomel; obstinate constipation; debility of constitution; consumptive habit of body; fashionable amusements; dancing; late hours; tight lacing; indeed, anything and everything that injuriously affects either the mind or the body.

A woman threatened with miscarriage usually experiences a feeling

of lassitude, of debility and depression of spirits; she feels as though the menses were coming on and complains of weakness and uneasiness about the loins, the hips, the thighs, and the lower part of the abdomen. This is an important stage of the case, and one in which judicious treatment will almost to a certainty prevent a miscarriage.

SYMPTOMS OF MISCARRIAGE

If the above symptoms are allowed to proceed, unchecked and unattended, after a day or two there will be a slight show of blood. This show soon increases to flooding, and shortly becomes clotted. There may at this time be but little pain, and the miscarriage may, with judicious treatment, be even now warded off. At all events, if the miscarriage can not be prevented, the ill effects may, with care, be palliated, and means may be used to prevent a future miscarriage.

If the miscarriage is allowed to proceed, a new train of symptoms develop, pains begin to come on, at first slight, irregular, and of a grinding nature, but which soon become more severe, regular, and of a bearing-down nature. Indeed the case is now a labor in miniature, and the patient is sure to miscarry.

There are two stages of miscarriage—first, the separation of the ovum from the womb; and second, the expulsion of the ovum from the womb. The former, from the rupture of vessels, is necessarily attended with more or less of flooding. The latter, in addition to the flooding, from the contraction of the womb, with more or less of pain. If there is separation, there must follow expulsion, as Nature is doing all she can to get rid of the separated ovum, which has now become a foreign body; and if there is expulsion, there must, of necessity, be pain, as contraction of the womb invariably causes pain; hence there is, in every miscarriage, more or less of flooding and of pain; indeed you cannot have a miscarriage without both the one and the other.

TIME OF MISCARRIAGE

The most usual time for a woman to miscarry, is from the eighth to the twelfth week. It is not confined to this period, as during the whole

time of pregnancy there is a chance of premature expulsion of the contents of the womb. A miscarriage before the fourth month is at the time attended with little danger; although, if neglected, it may forever injure the constitution. A miscarriage sometimes begins and ends in a few days —five or six; it at other times continues two, and even three weeks.

TREATMENT OF MISCARRIAGE

If the patient has the slightest show, she should immediately confine herself to the bed and keep perfectly quiet. A soft feather bed must be avoided; it both enervates the body and predisposes to miscarriage. There is nothing better for her to sleep on than a hair mattress. Sexual intercourse should be carefully avoided; indeed, the patient ought to have a separate bed. This is most important advice.

The patient should be put on low diet, such as arrowroot, tapioca, sago, gruel, chicken broth, tea, toast and water, and lemonade; and whatever she drinks ought to be cold. Grapes at these times are cooling and refreshing. The temperature of a bedroom should be kept cool; and if in summer, the window ought to be thrown open. Laxative medicines must be avoided; and if the flooding is violent, cold compresses can be applied externally to the parts. If this is not effective use one gallon of hot water as an injection into which has been added one teaspoonful of powdered golden seal.

CARE OF A PATIENT AFTER MISCARRIAGE

The same care is required after miscarriage as after a confinement; indeed, a patient requires to be treated much in the same manner. She ought to keep her bed for a few days, and should live upon the diet recommended after a confinement, avoiding for the first few days stimulants of all kinds. Many woman date their state of ill health to a neglected miscarriage; and it behooves every woman to guard against such a misfortune.

PREVENTION OF MISCARRIAGE

A patient prone to sterility or miscarriage even ought to use every means to brace and strengthen the system. The best plan is to leave the

husband for several months, and go to some healthy spot; neither to a fashionable watering-place, nor to a friend's house where company is entertained, but to some quiet country place—if to a healthy farmhouse so much the better. A few summer months spent in the pine woods of Michigan has in frequent cases been the means of bringing about conception.

Early hours are quite indispensable. One should lie on a hair mattress, and have but scant clothing on the bed. The diet should be light and nourishing. Gentle exercise ought to be taken, alternating with frequent rest.

Cold baths ought to be taken every morning, and the body should afterward be dried with coarse towels. If in winter let the water be made tepid, and its temperature gradually lowered until used quite cold. A shower bath is in these cases serviceable; it braces and invigorates the system, and is one of the best tonics possible.

A person prone to miscarry ought, as soon as she is pregnant, to lie down a great part of every day; she should keep her mind calm and unruffled, live on a plain diet, retire early, and have a separate sleeping apartment from her husband. She ought to abstain from taking laxative medicine. Constipation should be avoided or treated by following the suggestions in the chapter on constipation.

Gentle walking exercise daily is desirable; long walks and horseback riding being avoided.

As the usual period for miscarrying approaches (for it frequently comes on at one particular time), let the patient be more than usually careful; let her lie down the greatest part of the day; let her mind be kept calm and unruffled; let all fashionable society and every exciting amusement be eschewed; let both the sitting and the sleeping apartments be kept cool and well ventilated; let the bowels, if costive, be opened by an enema of warm water; let the diet be simple, yet nourishing; let all stimulants be avoided, and if there are the slightest symptoms of an approaching miscarriage, such as pains in the loins, the hips, or in the lower abdomen, or the slightest show of blood, let a physician be instantly

sent for, as he may, at an early period, be able to ward off the threatened mishap.

NO APOLOGY FOR ABORTION

Children have a right to be born! Alas, that this God-given privilege should ever be called in question! That it is so, however, the testimony of modern physicians, the daily records of the newspapers, the fulminations from the pulpit, the remonstrances of philanthropists, and the forebodings of philosophers, abundantly prove.

If we examine the history of abortion, we shall find that this crime, so commonly practiced as to demand attention, is of extremely ancient origin, having existed among pagan nations from the earliest times.

If this evil were principally resorted to for the purpose of shielding from open disgrace the victims of dishonored virtue, there might perhaps be a faint apology for silence, but with shame for the wives and mothers of our land, who are the chief offenders. This statement may seem strange to the ears of many a devoted wife and mother, but to the physician, who is generally a receiver of family secrets, it is a well-known fact.

ABORTION A MURDER

Intentional abortion is to all purposes a murder. This is now conceded by all who are informed upon the subject. Among the ancients the distinction was made that before the time of quickening the child had no life, and therefore there was no sin in its destruction. This statement has, however, been proven to be false. The embryo is alive and hence quick from the moment of conception. Modern science has abundantly proven this to be a fact. It follows, then, that this crime is equally as great whether committed in the early weeks of pregnancy or at a more advanced period in the life of the fœtus.

The laws of all civilized countries now make abortion a crime, and the punishment severe. All who are accessory to it may be punished with imprisonment, and in some cases even with death.

DANGER ATTENDING ABORTION

Aside from the crime, however, the maternal instinct of the mother and a sufficient regard for her own health should prevent any and all attempts of this character. The amount of physical suffering that may follow cannot be estimated. Inflammations of the womb and kindred disorders of the generative organs are almost sure to result, and frequently will resist the most skilled treatment. At other times blood poisoning may follow from the retention of the placenta and membranes of the fœtus. This may produce immediate death, and at best can but end in broken health and lifelong suffering.

CHAPTER XV

DISEASES PECULIAR TO WOMEN AND THEIR CURE

SPACE will not permit an exhaustive description of all the many diseases to which mankind is subject, but we have selected the more common, such as are annoying but not seriously dangerous, and such as may be treated with comparative safety by any intelligent mother. The descriptions are as complete as space will allow; the treatment recommended is by the most advanced physicians of the homeopathic school, and the remedies advised are those that can be easily obtained.

INFLAMMATION OF THE WOMB

Of all uterine diseases in importance and frequence, chronic inflammation ranks first. It is most common between the ages of puberty and the cessation of the menses, but it may occur at any time of life. This inflammation may be simple or complicated, but a vast majority of so-called "female complaints" have their origin in acute inflammation of the womb, which soon passes into the chronic form by the persistence of the cause.

There are many varieties of the disease, and each receives its name according to the part affected, thus: Inflammation of the body of the womb; Inflammation of the lining membrane of the body of the womb; Inflammation of the membrane lining and covering neck of the womb; Inflammation of the tissues of the neck of the womb; Ulceration of the neck of the womb.

Often an inflammation of the neck of the womb may exist for a period of years, especially in the unmarried, without giving any great discomfort —more than a feeling of lassitude, with an inability to stand erect or walk for any length of time.

As the inflammation progresses the feeling of weight and heaviness increases till the pain extends down the limbs and through the bowels. Physical exertion is painful, and at times almost impossible.

In chronic inflammation of the body as well as of the neck of the womb, the menstrual flow is usually somewhat impaired.

The ovaries are supplied by the same system of blood vessels, and readily inflame when there is an increased action of the uterus. Ovarian tumors are often the result of a prolonged inflammation of the womb. Catarrhal discharges from the bowels, and piles or hemorrhoids may follow inflammation of the womb, especially when there is retroversion or a falling backward of the body of the womb. It is apparent that the cause must be removed before the disease will disappear. The restoration to health of each organ involved, will necessarily be slow, and great patience will be required.

CHRONIC INFLAMMATION OF THE WOMB

Chronic inflammation of the womb, when of long standing, greatly impairs, if not wholly destroys the general health. The circulation is sluggish, the hands and feet are cold, the face wears an anxious expression, the muscles become weak and easily tire with only moderate use. The disposition becomes irritable and nervous—a slight provocation being sufficient to bring on an attack of hysteria. The whole temperament and disposition seems changed. Friends are regarded with distrust, and therefore avoided. The patient becomes morbidly sensitive, and always looks upon the dark side of life.

The causes which may lead to the development of uterine disorders are many—such as a sudden checking of the menses from exposure to cold—an injection of cold water when in an over-heated condition—lifting too heavy weights—falls and blows across the abdomen—any of these may be the exciting causes of serious uterine derangement.

Another fruitful source of uterine disorder is wearing improper clothing. The free circulation of the blood through the body is impeded by tight lacing, and congestion of the organs of the pelvis follows as a result.

Any cause that produces stagnation of the blood, develops in time congestion and relaxation. For example—fasten a rubber band around the arm, only moderately tight, and in a short time the hand begins to swell and congest by reason of the inability of the veins to return the blood to the arteries—serious results will follow if the congestion is prolonged.

Any cause which leads to a general weakness of the muscles of the abdomen predisposes to diseases of the womb, especially to inflammation. If the health is impaired, the muscles and ligaments supporting the womb and bowels sympathize in the general debility. Displacements easily occur in relaxed conditions of the abdominal muscles. Displacements are reasonably sure to be followed by inflammations and congestions.

MORE IMPORTANT THAN ELECTIVE FRANCHISE

With this array of facts before us, it behooves mothers and daughters to study well the symptoms of disease—the causes that lead to their development, as well as the means of their prevention. If one-tenth the effort was put forth to enlighten women on these vital questions upon which depend the future of our race, that is displayed to teach women that they need the elective franchise, we might then develop a race of women who would be gladly admitted to legislative halls, because their combined physical and intellectual strength would be well adapted to give counsel and aid in the affairs of the nation.

The weight of the clothing should be borne by the shoulders. No pressure or weight should be allowed to rest upon the hips and bowels. The injurious effect of high-heeled shoes can hardly be overdrawn. The abdominal and pelvic muscles are kept upon a tension which will produce serious inflammation of the pelvic organs. "Common sense shoes" are the only sensible shoes for a woman to wear.

NEAT, HEALTHFUL DRESS

Women who cannot decide to abandon the corset altogether, should select one with spiral springs at the sides, which expand and contract in accordance with the motions of the body. This corset should be pro-

vided with shoulder straps, by which the weight of the clothing is born. Buttons should be sewed upon the corset at the waist line, to which the skirts may be attached by means of buttonholes in the bands. A very convenient under-waist may be made of silesia or drilling. The front and back are cut like any dress-waist, only very loose fitting—cut out that part of the front covering the bust and replace by a gathered puff about eighteen inches long and the depth of the piece removed. The waist should be finished at the bottom with a band two inches wide and lined with heavy material, so as to be strong enough to bear the weight of the skirts suspended to it by means of buttons. It will be seen that this waist is made to support the weight of clothing from the shoulder without the annoyance of straps or suspenders. The effect of this waist is to give a full, well developed bust. Under vests made of "Jersey cloth" are especially comfortable, as they cling closely to the body and yet do not impair the movements of the body or impede the circulation.

FRESH AIR TONIC BETTER THAN MEDICINE

Too much cannot be said of the benefits derived from exercise in open, pure air and deep breathing. As a tonic, it is better than medicine. It gives tone to the appetite, aids digestion, and lends vigor to both mind and body. Invalids who suffer from nervous prostration or from uterine diseases should live much in the open sunshine. Outdoor life reinforces the strength, increases the appetite, repairs the blood, quiets the nerves and gives new life and health to the body. The greatest physicians are good water, sunlight, deep breathing and exercise in pure air.

The tendency of uterine disease is to reduce the quality of the blood and produce weakness and debility. Therefore the food should be generously given and of a very nutritious character, and not highly seasoned. Milk, cream, soft eggs, game, poultry, mutton chops, fish, oatmeal and entire wheat bread are most suitable for a diet.

Tonic medicines will not be required very long, if the patient can be induced to try the benefits of outdoor life and moderate exercise. Take

of "Elixir Peruvian Bark and Iron." (Ask the druggist for it.) Dose—Teaspoonful three times daily in water.

If there is any tendency to indigestion, or a weakened condition of the stomach, the above formula will be found a very valuable remedy.

In most cases of inflammation of the womb, there is a tendency to constipation of the bowels, which must in no wise be permitted to remain, as a perfect cure of uterine inflammation cannot be accomplished while constipation exists. Strict attention must be paid to the rules laid down in the chapter treating on that subject.

HOW TO INDUCE SLEEP

Uterine disease is productive of great nervous excitability, often to such an extent that the patient finds it almost impossible to sleep. Attention to hygienic measures, such as proper ventilation of the sleeping room, exercise and a generous out-of-door life, will often be all that the patient needs to secure the most refreshing sleep. If, however, the inability to sleep is persistent after faithfully adopting the above hygienic measures, relaxing medicines must be resorted to. Apply a bandage of cold water. This should consist of a towel three yards long, wrung out of cold water and wrapped around the body, beginning directly under the arms and letting it pass down over the thighs. Over this should be wrapped an equal length of canton flannel. This is most excellent to induce sleep and acts at the same time upon the bowels.

AVOID SEXUAL EXCITEMENT

In all cases of acute inflammation of the uterus there should be a total abstinence of marital relations. This is not always easily accomplished, as few husbands understand the necessity for such a course. Anything which tends to attract the blood to the womb will increase the congestion and inflammation; therefore sexual intercourse and everything which tends to arouse the passions should be carefully avoided. Travel and a change of scenery are often very beneficial, from the fact that the necessary rest can be secured, and the thoughts will be diverted from the disease, which

is of incalculable value to the patient. Constantly dwelling upon any disease most surely fastens its hold upon its patient. It should, therefore, be the aim of friends to divert the mind into any healthy channel.

EXERCISES TO STRENGTHEN THE WOMB

A weakened condition of the abdominal muscles is the cause of misplacements and congestions. Then, in order to effect a cure of the diseased organs, exercise tending to strengthen these muscles must be resorted to. When any muscle or set of muscles is exercised more blood is carried to the part, from which it receives strength and nourishment. Muscles unused become weak and powerless, and vice versa. When a patient is too weak to exercise his muscles, an assistant may do it for him —thus a person confined to his bed for weeks, with typhoid fever, loses all muscular power. By having the muscles rubbed and stretched thoroughly for hours each day he will regain his strength rapidly. The Swedish movement is founded upon this principle of localized exercise, and has much in it to commend itself to the public mind. So is osteopathy.

EXERCISE NO. 1

"The woman lies upon her back, upon a firm bed or couch, her hands tightly clasped over her head, and her feet drawn up to her body, with her knees strongly bent. Then with a moderate effort she slowly raises her hips several inches from the couch, holds them there for about half a minute and allows them to slowly return to the couch. This movement may be repeated, with short intervals of rest, five or six times.

"If the strength of the patient is not sufficient to perform these movements without too much fatigue, an assistant may aid her by placing a hand under the back near the hips, sustaining the body, according to the necessity of the patient. This movement will be found very effectual in strengthening the abdominal muscles and relieving congestion and inflammation of the womb."

EXERCISE NO. 2

Another beneficial exercise is found in the following method: The

woman lies on a firm couch, face downward, resting the extremities of her body upon her elbows and toes. Then with a strong effort of the will, she raises her hips from the couch, so that her whole weight rests upon her elbows and toes. After maintaining herself in this position as long as her health readily permits, she will settle her body on the couch. Repeat three or four times. An assistant may aid a feeble patient the same way as in the previous example. These movements will elevate the womb in the pelvic cavity, as well as strengthen the abdominal muscles, increase the circulation, relieve cold hands and feet, and nervous headache.

LOCAL TREATMENT FOR WOMB TROUBLE

In mild, uncomplicated cases of uterine disease, the general methods of treatment, laid down in the foregoing chapters, will be sufficient to effect a cure. If, however, there are complications of a grave character, the advice and aid of a physician should be sought, as the recovery will be hastened by combining local treatment with the general treatment indicated in this book. Injections of hot water alone into the vagina, preseveringly used, are of great value in relieving congestion and inflammation of the womb. Common table salt may be added to the hot water with benefit, in severe inflammation. If there is prolapsus of the womb from weak vaginal walls, copperas can be added in moderate quantities, one dram to each quart of water. In case of both ulceration and inflammation, an excellent remedy is found in the following prescription:

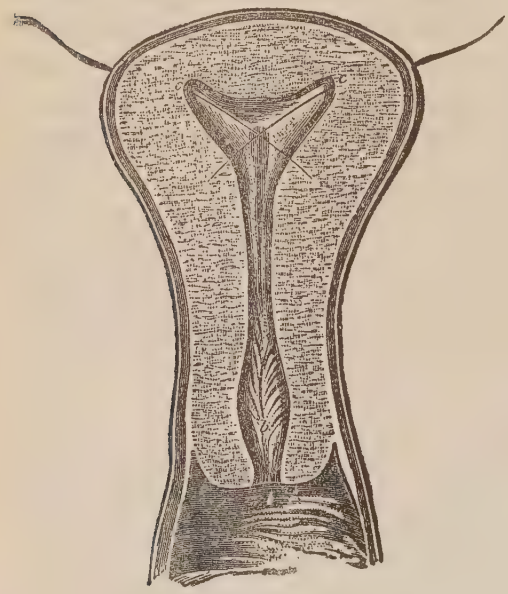
Golden seal, 10 grains; 1 teaspoonful boracic acid in 2 quarts of water as hot as can be borne. Inject each night on retiring. A good syringe for this purpose is "The Fountain Syringe." It consists of a large rubber bag capable of holding several quarts of water, to which is attached several feet of rubber tubing, at one end of which is attached a tube. The bag is suspended six or seven feet from the floor, while the patient sits over a slop jar, placed upon the floor. The water is poured into the receiving vessel, and the force of the stream thrown against the neck of the womb is regulated by the height at which the bag is placed above the floor.

As before stated, injections must be perseveringly used if beneficial.

They should be continued from ten to twenty minutes, at one time, according to the severity of the inflammation. The temperature of the injections should be regulated by the condition of the patient and its effect upon her. Hot water is usually most desirable in acute inflammation, the symptoms of which are an internal burning sensation, which is greatly aggravated by exertion. Another remedy for acute inflammation of the womb, in praise of which too much cannot be said, is the following:

Take of—Permanganate of Potash, six grains;
Glycerine, two ounces.
Mix.—Apply on cotton, and insert into the vagina on retiring.

The best method of using the cotton is to cut a four-inch square piece of snow-flake batting, fasten the four corners together with a soft twine; it will make a ball-shaped pledget, over the top of which is poured a little of the mixture. Press the pledget into the vagina as far as possible, while upon the back in bed. The twine remains between the limbs and furnishes a ready means to remove the cotton the next morning. The amount of discharge following the removal of the pledget will be truly surprising. The permanganate of potash should be dissolved in a little water before adding the glycerine.



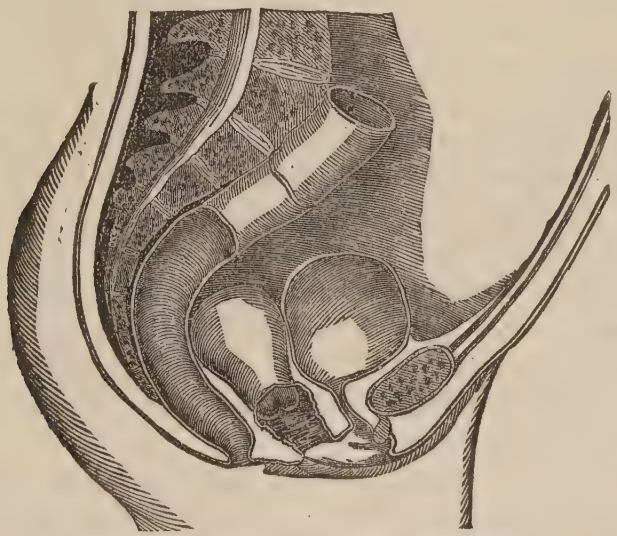
THE UTERUS LAID OPEN.

a. The os uteri. b. The cervix. c. c. Extremities of the Fallopian tubes.

Patients who have been unable to sleep from pain in the back, limbs and pelvis, will often rest quietly after a warm hip bath, or a copious vaginal injection of hot water.

FALLING OF WOMB (UTERUS)

The uterus is the organ of reproduction or gestation. Its position in the pelvic cavity is behind the bladder and in front of the rectum, beneath the intestines and above the vagina. It is held loosely in its position by folds of peritoneum, which inclose muscular fibers. There are also six ligaments which contribute to its support, three on each side. The broad ligaments extend from the border of the uterus to the sides of the pelvis, leaving the uterus suspended between them. The round ligaments are



PROLAPSUS UTERI, OR FALLING OF THE WOMB.

two in number and pass from the top of the womb to the pelvis; the utero-sacral ligament gives the posterior support. From the above description of the uterine supports it is evident that it may be easily displaced and moved upward or downward to a considerable extent. These natural supports are sufficient to maintain it in proper position in conditions of health. If, however, the bowels have been crowded downward, and held in this position by too heavy and unsupported clothing, or tight lacing, the womb will also become displaced and diseased. The displace-

ments may be either forward, backward or latterly. When the womb is tipped forward it is called anteversion, when turned backward it is named retroversion. Displacements are rare laterally, though very troublesome when they do occur.

Prolapsus or falling of the womb is very common, and the result of complex causes. When the prolapsus is only partial the uterus descends somewhat into the vagina. When complete, it passes down through the vagina and protrudes through the labia. Causes: There are many causes that lead to prolapsus, among which may be mentioned excessive weight of the womb from tumors; dropsy of the bowels; falling heavily upon the nates; weakening of the uterine ligaments, and the relaxing of the vaginal walls. The vaginal walls may become relaxed by too frequent child-bearing, a persistent leucorrhœal discharge, habitual constipation, excessive sexual intercourse and a lacerated perineum.

There is an inherent tendency in muscular fiber to contract, therefore uterine displacements, in their early stages, will recover readily upon the removal of the cause. It is different, however, when by inflammation, congestion, or tumors, the uterus has become badly diseased.

It frequently occurs, after child-birth, that the uterus is very much prolapsed, but if the patient lies in bed a proper length of time, there is rarely any ill effects from it afterwards, as the tendency of all disease is to recovery, under proper management.

Cures are only effected by restoring the proper tone to the uterine ligaments and the abdominal muscles. A good fitting bandage, made of drilling, similar to one worn after child-birth, is often very useful in supporting the bowels.

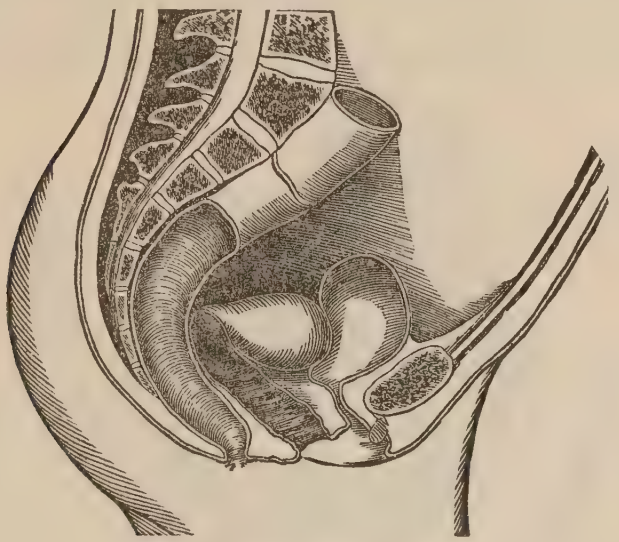
ANTEVERSION OF THE WOMB

The womb in its natural position inclines considerably forward. The inclination of the uterus is such that it coincides with the axis of the pelvic cavity. In anteversion the womb falls still farther forward, sometimes to such a degree that it lies almost horizontally across the pelvis.

During the period of development the womb is always anteverted, but

after puberty it disappears usually. Fibroid tumors situated on the anterior base of the uterus will produce anteversions by dragging the organ forward, pregnancy in the early stages, too great distension of the bladder, wearing stays which press upon the body of the womb, and congestion of the uterus will cause anteversion.

Symptoms.—The body of the uterus presses upon the bladder and narrows its capacity to retain urine, thereby causing a desire to pass water



ANTEVERSION OF THE WOMB.

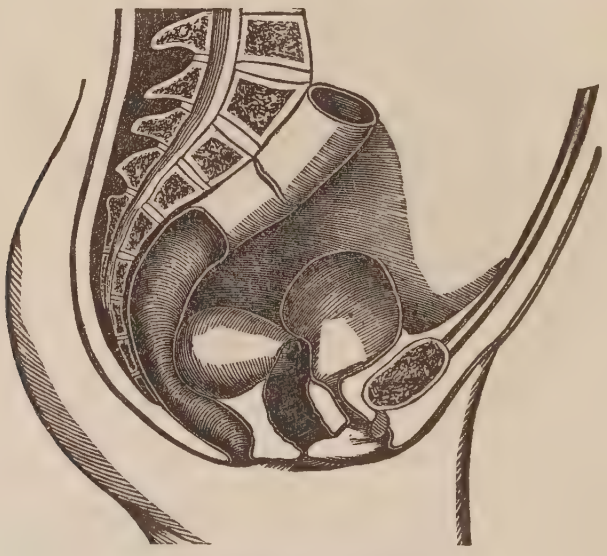
frequently. If there is much inflammation attending the anteversion there is often great pain in urinating. The water is highly colored and deposits a thick sediment. The patient finds the most discomfort in the upright position, and is therefore adverse to any activity.

Treatment.—If there are any complications, as inflammation, congestion or ulceration of the womb, they should be removed, as they are frequently the cause, and until they are partially removed, active measures to rectify the anteversion could not be borne. The patient should lie upon the back with the hips elevated. To relieve pain and inflammation apply corn-meal poultice made as follows: One pint of corn-meal, 2 tablespoon-

fuls red pepper, 1 tablespoonful mustard; make a little thin and apply between two cloths. This does not blister. Or flannels wrung out of a strong decoction of hops and vinegar.

RETROVERSION OF THE WOMB

This disease is not frequent in women who have not borne children. The body of the womb falls backward upon the rectum, while the neck presses upon the bladder. It is the result often of a tumor, or an engorgement of the body of the womb, when sudden muscular efforts are sufficient



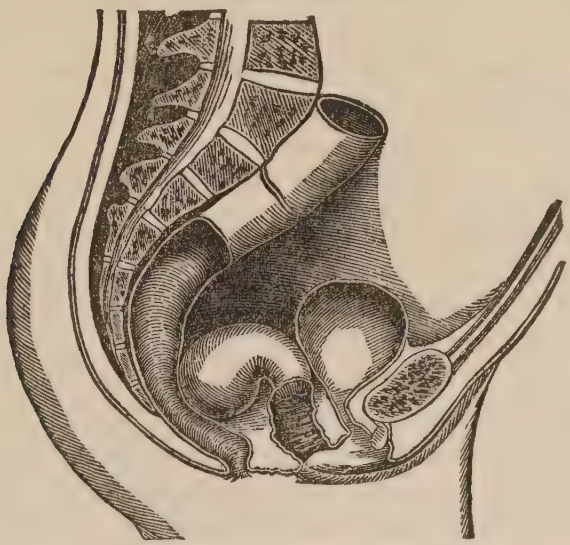
RETROVERSION OF THE WOMB.

to throw the uterus backward. Retroversion frequently follows labor, by the patient being compelled to lie upon the back for days. The uterus is then large and exhausted, and readily falls into the hollow of the sacrum, from which position it cannot easily rise. The obstetric bandage is another cause of retroversion. After an exhausting labor the uterus is too weak and too heavy to rise into the pelvic cavity properly—the bandage is applied to save the contour of the figure, at the expense of the

uterus, which is now unable to overcome all the forces combined against it.

Symptoms.—The symptoms of retroversion are almost identical with those of inflammation of the womb—pains low in the back and limbs—inability to walk—extreme nervousness and constipation is persistent from pressure of womb on rectum.

Treatment.—Remove the cause in the first indication. Subdue the



RETROFLEXION OF THE WOMB.

inflammation by poultices and hot applications over the bowels, give cooling aperients; uterine supports should not be attempted while there is acute inflammation.

RETROFLEXION OF THE WOMB

The terms retroflexion and retroversion are used almost synonymously, although differing slightly in detail. In retroflexion, the neck of the womb maintains its proper position, while the body falls backward. Vice versa is anteflexion.

Diseased conditions of the womb are the provoking causes of flexions.

The distinguishing difference between retroflexion and retroversion

is in the greater tendency to painful menstruation in the former, together with sterility.

Treatment.—The treatment is practically the same as for anteversion and retroversion. So far as possible remove the cause. Often it is of great value for the patient to travel, and form new acquaintances, visit new scenes; anything that will serve to take the patient's mind from a contemplation of her condition will be of incalculable benefit. The mind has more to do with binding our diseases to us than we can possibly realize, unless we watch the effect of mind over matter for ourselves. A careful study of this subject will repay the effort.

TUMORS OF THE WOMB

There are three varieties of tumors which are found frequently in the uterus, viz.: Fibrous, polypus and cancer. The two former are not usually fatal, while the latter is regarded always with grave apprehensions, from being of malignant character.

Fibroid Tumor.—The similarity of the muscular fibers of the womb with that of fibrous tumors is fully established. Tumors may develop in any part of the womb, but they are most frequent in the body. They vary much in size and numbers, over thirty having been found in one patient. The majority of these tumors, however, are single, and may attain great size.

Little is absolutely known in regard to the causes leading to their development, but among the predisposing causes are menstrual disorders, sterility, age and race. The colored people are most liable to tumors. Tumors seldom appear after menstruation ceases, nor before puberty. The time of life most liable to their development is during the period when the generative organs exhibit the greatest activity.

Symptoms.—The patient often has profuse hemorrhages, pains in the pelvic cavity, irritation of the bladder and rectum, profuse leucorrhœal discharge, and frequent watery discharges from the uterus; this watery discharge may be considered diagnostic of fibroid tumor. As the tumor enlarges it can be distinctly felt through the abdominal walls.

Treatment.—The action of medicine in promoting absorption of fibroid tumors is far less effective than desirable. Tonics are useful in a general way to build up the health if impaired. Iodide of potassium has been given in two-grain doses, three times a day, with good results. Equal parts of iodine and glycerine applied freely over the abdomen, with a camel's hair brush, mornings, seems to exert a favorable influence in checking the growth of the tumor.

POLYPUS OF THE WOMB

A polypus is a pear-shaped tumor attached to the uterus by a small pedicle or stem. It develops in the neck of the womb most frequently, although no part of the uterus is exempt. When it forms in the neck of the womb it frequently protrudes into the vagina and may pass out at the vulva.

Cause.—Inflammatory action of the uterus, or obstructions to the menstrual flow, or anything which tends to keep up active congestion, predisposes to the formation of polypus.

The symptoms of polypus are similar to those of fibrous tumors, as pain in the back, and hemorrhages; the latter is a pretty constant symptom, especially if the polypus lies in the neck of the womb or vagina, and is subject to constant irritation. Consult in this case a good physician.

CANCER OF THE WOMB

The breast, stomach and womb are the organs in which malignant tumors most frequently develop. According to statistics cancer of the womb is most common—and the point of attack is usually the neck of the womb. From a hardened and nodulated condition it soon passes into an ulcerative and sloughing state, and continues to destroy the surrounding tissues, till death comes to the relief of the sufferer. The duration of the disease varies from a few months to a few years. It is incurable, and will reappear after surgical removals.

The cause of cancer is supposed to be from some peculiarity of the blood. It occurs most frequently in middle life. It is an established fact that inflammation of the uterus is not a provoking cause of cancer.

This malady frequently makes considerable advancement without attracting much attention. When the tumor begins to slough away hemorrhages appear, and offensive discharges which produce abrasions in the vagina—the complexion assumes a waxy hue and the general health fails. Sometimes cancer is attended with sharp, lancinating pains.

Treatment.—But little can be done to arrest the progress of the disease. The indications are to control the hemorrhages, relieve the pain and the offensiveness of the discharges—for the latter purpose a solution of permanganate of potash, in the proportion of ten grains to the quart of water or twenty drops of carbolic acid to the same amount of water, will be found useful to inject several times a day. The pain may be controlled by opium or morphine. No other remedy will afford such relief. The general health must be supported by a very nutritious diet—as rare beef, cream, soft eggs, pure wine, etc. If the appetite is poor, give tonics.

LEUCORRHŒA, OR "WHITES"

The term implies the presence of a non-sanguineous discharge from the female generative passages. It is a very common disorder among women, and no age is exempt from it. It sometimes appears catarrhal in its nature, and is easily arrested by rest and injections of cold or tepid water. The menstrual period is usually preceded by a leucorrhœal discharge, as a result of temporary congestion, and passes away shortly after the menses cease. When leucorrhœa is constant and produces an itching of the external parts, or a burning sensation in the vagina, it is an indication of uterine disorder, and should be arrested at once. There are several varieties of discharges from the generative organs which are called leucorrhœa—any of which is caused by an increased secretion of the mucus lining of the affected part.

General weakness and debility may produce leucorrhœa; this general weakness may be associated with some derangement of the liver, lungs or heart. It may result from a general lowering of the vitality or nutrition of the body which constitutes the first stages of consumption. Local causes are any foreign growth in the womb; flexions, polypi in the uterus; con-

gestions and prolapsus of the uterus. Leucorrhœa is often produced in children by seat worms in the rectum, in which case there is more or less itching in the vagina; or it may occur from simple debility.

CURE FOR LEUCORRHŒA

The first care should be to remove the cause. If leucorrhœa is caused by physical weakness, tonics should be given, and careful hygienic measures adopted, such as baths, friction of the skin, outdoor life, change of scene, exercise, proper attention to the diet. All habits of a known pernicious tendency must be avoided. Injections are of great value, and ought to be used two or three times a day. In winter the water should be tepid or hot; in the summer, cold or tepid. For an injection: Tinct. of calendula, one ounce; 1 pint of glycerine; 10 drops carbolic acid; use an ounce of this in a quart of hot water. Take, internally, sepia (powder), procured of any druggist, 5 grains three times daily. Hayden's viburnum compound is also an excellent internal remedy. Dose: One-half teaspoonful twice each day in water. If the leucorrhœa discharge arises from congestion of the body or neck of the womb, injections of iodine are very useful, in the proportion of twenty drops to the pint of water. Local treatment is often the only real curative remedy for leucorrhœa.

CHAPTER XVI

CHANGE OF LIFE

THE object of this chapter is to teach woman how to preserve her health and strength through the critical period termed "change of life." This change is perfectly normal, as much so as the one occurring between the ages of ten and sixteen, and should be so regarded.

A few simple rules will apply to all cases, of whatever temperament. Nature is primitive in her operations, our aches and pains being simply her voice calling upon the intelligent forces, our thoughts, for assistance. It usually takes place between the ages of forty and fifty, although in some cases it may occur as early as thirty, and in others not until sixty; however, we can expect the change about the forty-fifth year.

"At puberty the ovary enlarges until it attains its full development, and begins its work of casting off each month a perfected ovule. When the forty-fifth year of a woman's life is reached the reverse process begins. The ovary begins to shrivel, soon reaching the size and acquiring much the appearance of a peachstone. A few months later it is still more shrunken, and after the cessation of the menses it often becomes so shrunken as to be scarcely recognizable. At the same time that the ovaries are undergoing this remarkable degenerative change, a similar change is taking place in the other organs of generation. The uterus also diminishes in size, as does also the vagina. The mouth of the womb becomes contracted, and after a time entirely closes. The upper part of the vagina is often contracted to such a degree as to produce folds closely resembling those which result from serious inflammations about the uterus. The breasts are diminished in size. These changes indicate unmistakably the decline of the function of reproduction, preparatory to its entire suspension."

SYMPTOMS OF CHANGE OF LIFE

The symptoms will vary according to the constitution of the woman; in some the change occurs by the discharge gradually diminishing in quan-

tity, in others by the intervals between the periods being lengthened. The woman may pass this period without having any more unpleasant symptoms than an occasional rush of blood to the head, or a headache. Others, however, may have very severe symptoms.

Headache, dizziness; biliousness, sour stomach, indigestion, diarrhœa, costiveness, piles; itching of the private parts; cramps and colic in the bowels; palpitation of the heart; swelling of the limbs and abdomen; pains in the back and loins; paleness and general weakness.

The neuralgias, nervousness, fidgets and hysterias which afflict some women at this period are such as to make life miserable. Flushings are also a frequent nervous disorder, caused by the rushing of the blood to any part of the body. Sometimes the flushing is accompanied by excessive heat or by violent throbbing. Sometimes nausea and vomiting accompany the flushing, or the patient may be thrown into a profuse perspiration, while at other times the mind becomes so excited that it amounts to actual delirium. These perspirations are sometimes so profuse as to saturate the bed-clothing. They may follow the flushing or occur independently. Usually they occur during sleep. They also attend mental excitement of any kind.

"CHANGE OF LIFE" NOT TO BE DREADED

Most women look forward to "change of life" with serious apprehension, and the prevailing opinion is that it is a period of great risk to health and even to life. This is a mistaken notion, however, and recent investigation proves that there is less mortality among women at this period than among men of the same age, and also that there is less mortality among women during this decade than during any other decade after the age of puberty. Women who safely pass this period have also a better chance of living to a ripe old age than have men. The woman who comes to this period with a constitution unimpaired by fashionable dress, by dissipation, or by excesses of any kind, has little or nothing to fear, and will almost invariably pass it quickly, and with safety. To the woman with feeble health and a broken constitution, however, this may prove indeed a critical

period, and she may well look forward to this time with apprehension and forebodings. A proper preparation will do much to mitigate the sufferings of this age, and it is well, indeed, if being forewarned in time, she begins to correct the evils of the past in matters pertaining to dress, diet and exercise.

HELPFUL SUGGESTIONS.

With the appearance of the first symptoms, begin treatment, which should be continued until change is established. This prevents abnormal growths, such as tumors, polypi, cancers, flooding, and many other conditions which render the change critical, and even dangerous to many women. Listen to the voice of Nature, and early take proper precautions to prevent future suffering. Many women, when contemplating this change, believe it will result fatally or in a serious disease; at least that perfect health will never be re-established. The reason so much suffering is experienced during this period is that women do not understand how to properly prepare the system to undergo it with undiminished health. If Nature's laws are not violated, there will be no trouble whatever.

Nature has four ways of removing obstructions; namely, the lungs, alimentary canal, kidneys, and the several million pores of the skin. With a proper understanding and management of these organs, no one need fear. The dress should conform to the laws of our being,—constructed to fit the body, and not the body the dress. Develop the muscular system by proper breathing and exercise.

NATURE'S WAY OF REMOVING OBSTRUCTIONS

Change of life is one of Nature's requirements, hence the necessity of attending carefully to the enriching of the blood and glandular secretions by nutritious food, and by keeping the skin clean and free for the perfect elimination of all superfluous secretions. Women at this period should take enemas, both by means of the rectum and the vagina. Many suppose that these weaken the system; on the contrary, they render it healthy, washing away all eliminations of the mucous tissues. This is as necessary as cleansing the skin. Very warm water should be injected if

troubled with gases; a little borax or bi-carbonate of soda dissolved in water will neutralize acidity and overcome this condition. If sore or irritated, use slippery elm injections, making them thin enough to pass easily through the syringe. Fountain syringes are best.

In cases of hot flashes, heartburn, and sleeplessness, a disordered stomach is generally found to be the cause. A rest from eating for twenty-four hours, with a one-grain dose of nux vomica, taken two or three times during the day, will overcome these difficulties. If great prostration occurs, the system should be treated with a good tonic, the patient obtaining as much pure air as possible, with moderate exercise. Thus strength will gradually return.

DIET AND BATHING DURING "CHANGE OF LIFE"

As to diet, entire wheat, or graham bread, with eggs, milk, broths and gruels should be taken, according to appetite; also fruits and nuts. Meats, except wild game, should be avoided, as a rule, though their indulgence sometimes produces a tonic action, causing an appetite for other things; when this results, their use is beneficial. The mind should not continually dwell upon self, but should be diverted with pleasant company, reading, riding, etc. The atmosphere of music also is very beneficial. Elevate the spirit, and the body will grow strong. Always dress comfortably, keeping the feet warm by wearing shoes that allow free circulation of the blood. Try to maintain regularity of the bowels by eating properly, and not by dependence upon medicines only. Muscular exercise and deep breathing are also essential.

AS HEALTHY AT FIFTY AS AT FIFTEEN

Hot bathing only is allowable at this period. Turkish, vapor and hot sitz baths are the most beneficial, but if these cannot be obtained, bathe in hot water, in a very warm room, rubbing the skin thoroughly with a turkish bath towel or flannel. Fleshy people can use water freely, but thin, weak people should rub oils well into the skin after taking a hot bath. Bathing twice a week is necessary. We also wish to impress upon your

minds that you can be as healthy at fifty as at fifteen years of age, with an improved mental education, experience and culture, which should add to your attractions.

During the period marked by change of life, there should be as little indulgence in the sexual relation as possible, none at all being preferable. It is better to invite menstruation as long as possible. By doing this you exercise a most excellent safeguard against congestions, inflammations and developments of uterine tumors and cancers. Injections should always be used after a discharge from the vagina, whether of the menstrual or leucorrhœal character. These injections will prevent the great amount of itching, pain and smarting from which most women suffer so much during this period. Do not fear to use water freely; a gallon at a time will not be too much, using, if possible, a fountain syringe, it being the most convenient means for injections. Commence with water comfortably warm, gradually increasing the temperature until quite hot. Have no fear that the douche will induce hemorrhage, for there is no means known to the medical profession so prompt in checking uterine hemorrhage as copious injections of hot water.

When change of life is so far advanced that the secretions from the womb and vagina are sharp and acrid, causing increased soreness and inflammation, add to the water a little borax or bi-carbonate of soda. Use this treatment every other day, wearing a wet towel over the sore parts at night, which may be wet in either hot or cold water, as is most agreeable. In connection with bathing and injections, use the third trituration of viburnum opulus, also of pulsatilla, one grain at a dose, the viburnum to be taken at night, and the pulsatilla in the morning. These medicines come prepared in any homeopathic pharmacy, and should be taken during one week of each month. If excessive thirst is experienced, cold water (without ice), acidulated with a few drops of phosphoric acid, and sweetened with a little sugar, may be drank freely. This makes a pleasant, healthful drink.

To relieve pain at the base of the brain, and along the spine, bathe freely in alcohol diluted one-third with water, producing gentle friction.

As a tonic, use the third trituration of nux vomica, morning and evening, in doses the size of a coffee bean. Also an elixir of calisaya and iron, one teaspoonful three times a day before eating.

DO SEXUAL PASSIONS CEASE

With the approach of the change of life it is usual for the sexual passions to cease. The reproductive organs have finished their work, and it is but natural that the feelings dependent upon them should also cease to exist. Sometimes, however, the opposite is the case, and the passions increase in intensity, and become more violent than at any other time of their lives. This condition of things should always be looked upon with serious apprehensions, for it is against nature, and may be the indication of some grave disease. There is no doubt but that sexual gratification at this time is a very common cause of intensifying all the numerous inconveniences and ailments which are attendant upon this period, and hence continence is not only recommended, but should be enjoined as one of the most essential hygienic measures by which a safe and rapid transit through this period of sexual decline may be insured.

CHANGE OF LIFE IN MAN

Change of life takes place in man as well as in woman. His system undergoes a process not identical with, but similar to, that occurring in her. At puberty the boy develops the sperm or seed, which is the male principle, and the girl develops the ovum, which is the female principle. Correspondingly, he changes again, with her, at the age of from forty to fifty or fifty-five. He suffers through nervousness, sleeplessness, pain at the base of the brain, tendency to softening of the brain and insanity. Suicides are also more common among men at this age than at any other. The eyesight changes, rendering the use of spectacles necessary. The activity of the generative organs diminishes, and their functions grow weaker. To abstain from sexual intercourse during this period is of the greatest importance, and as essential to the welfare of men as of women.

CIRCULATION OF THE BLOOD.

(See Plate 1.)

1. Carotid arteries, or the arteries of the head.
2. Innominate artery, or the artery without a name.
3. Sub-clavian arteries, or the arteries beneath the collar bone.
4. The great artery leading from the heart.
5. Pulmonary arteries, or the arteries of the lungs.
6. Thoracic aorta, or the artery of the chest.
7. Gastric artery, or artery of the stomach.
8. Hepatic artery, or artery of the liver.
9. Splenic artery, or artery of the spleen.
10. Artery of the lower body.
11. Mesenteric arteries, or arteries of the bowels (upper and lower).
12. Renal arteries, or arteries of the kidneys.
13. Ascending vena cava or the great vein coming down to the heart.
14. Innominate vein, the unnamed vein.
15. Sub-clavian vein, the vein beneath the collar bone.
16. Jugular, the large veins of the neck.
17. Pulmonary, veins of the lungs.
18. Ascending vena cava, the great vein leading up to the heart.
19. Hepatic vein, vein of the liver.
20. Gastric vein, vein of the stomach.
21. Splenic vein, vein of the spleen.
22. Mesenteric vein, vein of the bowels.
23. Portal vein, the great veins of the bowel, stomach and spleen leading to the liver.
24. Renal vein, vein of the kidney.
25. Right auricle, the right upper chamber of the heart.
26. Left auricle, the left upper chamber of the heart.
27. Right ventricle, the right lower chamber of the heart.
28. Left ventricle, the left lower chamber of the heart.
29. Thoracic duct, the big duct carrying milky fluid from the intestines to the left vein under the collar bone.
30. The stomach.
31. The spleen.
32. The liver.
33. The kidney.
34. Duodenum, the bowel leading from the stomach.
35. Ascending colon, the first part of the large bowel.
36. Descending colon, the large bowel going down to the rectum.
37. Lymphatic glands of the mesentery, glands of the bowels.

PART IV

CARE AND MANAGEMENT OF INFANTS AND CHILDREN

CHAPTER XVII

INFANTS---AND HOW TO CARE FOR THEM

"A pebble in the streamlet scant
Has turned the course of many a river.
A dewdrop on the infant plant
Has warped the giant oak forever."

THE proper management of infants is a vital question—a mother's question,—and the most important that can be brought under the consideration of a parent. Strange to say, it is one that has been greatly neglected. Mothers too frequently undertake the responsible management of children without previous instruction, or without forethought; they undertake it as though it could be learned either by intuition, by instinct, or by affection. The consequence is, that frequently they are in a sea of trouble and uncertainty, tossing about without experience or compass.

How many celebrated men have owed their greatness and their goodness to a mother's training? "The fate of a child," said Napoleon, "is always the work of his mother," and this extraordinary man took pleasure in repeating, that to his mother he owed his elevation. The character of the mother influences the children more than that of the father, because she is more exposed to their daily, yea, hourly observation.

A child is the precious gift of God, the source of a mother's purest enjoyment and the strongest bond of affection between her and the husband.

BABY'S FIRST NEED

If the following pages insist on the importance of a mother's one duty more than another, it is this,—that she herself look well into everything pertaining to the management of her child. Blessed is that mother among mothers, of whom it can be said, she hath done what she could for her child—for his welfare, his happiness, and his health.

The first need of the little one as he enters this world is to be made comfortable. What is better than to immediately anoint the entire body in olive oil or pure sweet lard, then, after wiping him with a soft cloth, roll him up in soft blankets, head and all, and put him away to sleep for a space of three hours. The reason for this oiling is threefold—it nourishes the body, removes the paste-like substance found on every new-born child and removes the soreness and tenderness experienced by all infants caused by the many hours of contraction through its passage into the world.

CARE OF THE NAVEL

The navel string should be tied and wrapped in a piece of fine old linen, unsinged; when singed it often irritates the infant's skin. Take a piece of soft linen, about three inches wide and four inches long, wrap it neatly round the navel string, in the same manner you would around a cut finger, and then tie it with a few rounds of white thread. The navel string thus covered should, pointing upward, be placed on the belly of the child, be secured in by means of a flannel belly-band.

If after the navel string has been secured, bleeding should occur, the attendant ought immediately to take off the covering and tightly retie the navel string. To make assurance doubly sure, after once tying it, she should pass the threads a second time around the navel string, and tie it again. After carefully ascertaining that it no longer bleeds, fasten it up as before. Bleeding of the navel string rarely occurs, yet in case it should, if the above directions are not adopted, the child's after health, or even his life, may be endangered.

The navel string generally separates from the child from three to five

days after birth. If the navel string does not come away at the end of a week, nothing should be done to cause the separation—it ought always be allowed to drop off. Meddling with it has frequently cost the babe a great deal of suffering, and in some cases even his life. The navel is sometimes a little sore after the navel string comes away, in which case a little cosmoline should be spread on lint, and applied every morning to the part affected.

A rupture of the navel is occasioned by the child incessantly crying. They can only be cured in infancy and childhood. If allowed to run until adult age, a cure is impossible. Palliative means only can be adopted. The best treatment is to apply a piece of tin foil covered with linen and held in place by the belly bandage.

THE INFANT'S FIRST WATER BATH

Now that the babe has had a good sleep and has been nourished by the oil bath, it is ready for a castile soap and warm rain water bath. Care should be taken that the soap does not get into the eyes, as it may produce inflammation.

Soon as the navel string comes away a mother ought to commence washing the infant either in a tub, or a nursery basin. Be not afraid of water. It is one of the best strengtheners to a child's constitution. How many infants suffer from the want of water! For the first part of the washing a piece of flannel is very useful to use with the soap. It loosens the dirt and perspiration better than a sponge, but for the finishing up process a sponge is superior to flannel. It gets into the nooks, corners, and crevices of the skin. Besides, it is softer and more agreeable to the tender skin of the babe.

An infant ought, every morning of his life, to be thoroughly washed from head to foot. The head, before placing him in the bath, should be wet, then, with a piece of flannel well soaked, cleanse his whole body, particularly his arm-pits, his thighs, and his groins; then take a large sponge in hand, and allow the water from it to stream all over the body, particularly over his back and loins. Follow this advice and you will find the plan most

strengthening to the child. After every bath, the skin must be thoroughly but quickly dried with warm, dry, soft towels.

The ears must be carefully and well dried with a soft, dry napkin; inattention to this advice has sometimes caused a gathering in the ear, and at other times it has produced deafness. Directly after the infant is dried, all the parts that are at all likely to be chafed ought to be well powdered; after he is well dried and powdered, the chest, back, bowels, and limbs should be gently rubbed, taking care not to expose him unnecessarily during such friction.

EVENING BATH FOR INFANTS

It is restful to them to partially wash them each evening. It may be necessary also to use a sponge and warm water during the day, each time after the bowels have been relieved. Cleanliness is one of the great incentives to health, and therefore cannot be too strongly advised.

With regard to the kind of powder with which to dust an infant, there is nothing better for general use than starch—the old-fashioned starch made of wheaten flour—reduced by means of a pestle and mortar to a fine powder; or violet powder, which is nothing more than finely powdered starch scented, and which may be procured of any druggist.

If the parts about the groin are chafed after sponging them with rain water, dust with fine powder. The best way of using this powder is to tie a little of it in a piece of muslin and then gently pat the parts with it.

Remember, excoriations are generally owing to the want of water—to the want of an abundance of water. An infant who is well bathed every morning seldom suffers from any of the numerous skin diseases.

TREATMENT OF A GROIN RUPTURE

A groin rupture can also be permanently cured, if properly attended to. The best thing to do is to place the bowel back into the abdomen and then warm any good adhesive plaster and place over the rupture. Bandage down well. Continue treatment until rupture is well healed.

HYGIENIC DRESS FOR AN INFANT

A flannel belly-band ought to be worn until the child is three months old. It should be moderately, but not tightly applied. If tight it interferes with the necessary movement of the bowels.

The under garment should be made of nice fleecy goods—Canton flannel is the best we have at present—cut princess, reaching from the neck to ten inches (twenty-five inches long) below the feet, with sleeves to the wrists, and having all the seams smooth, and the hems at the neck, wrist and bottom upon the outside—the latter turned over once and felled or cat-stitched—a tie and button behind. Here you have a complete fleece-lined garment, comfortable and healthy, and one that can be washed without shrinking. The next garment is made of baby flannel (woolen), also cut princess, same pattern, only one-half inch larger, reaching from the neck to twelve or fourteen inches below the feet—to cover the other —with generous armholes pinked or scalloped, but not bound, and with two buttons behind at the neck, and may be embroidered at pleasure. The dress cut princess to match the other garments is preferable.

These garments should be put together before dressing—sleeve within sleeve—and then put over the little one's head at once and buttoned behind, and the baby is dressed, there being but one pin—a diaper pin—in baby's dress instead of fifteen. No shoulder blanket should be used, because it is sometimes over the head, sometimes about the shoulders and neck, and sometimes off entirely, and these changes are exposures. Accustom the little one from the first to go without it.

At night the dress should be simply a Canton flannel nightdress and diaper and a belly-band—the dress being not unlike the under garment in the suit, only a little longer.

A WORD TO YOUNG MOTHERS

A babe's clothing ought to be light, warm, loose, and free from pins. Many infants' clothes are both too long and too cumbersome. It is really painful to see how some poor little babies are weighted down with a weight

of clothes. They may be said to bear the burden, and that a heavy one, from the very commencement of their lives. The clothing should be warm, without being too warm. The parts that ought to be kept warm are the chest, bowels, and feet. If the infant is delicate, especially if subject to inflammation of the lungs, he ought to wear a fine flannel shirt, which should be changed frequently. The dress should be loose, so as to prevent any pressure upon the bloodvessels, which would otherwise impede the circulation, and thus hinder proper development of the parts. It ought to be loose about the chest and waist, so that the lungs and heart may have free play. It should be loose about the stomach, so that digestion may not be impeded; it ought to be loose about the bowels, in order that the spiral motion of the intestines may not be interfered with—hence the importance of putting on a bandage moderately slack; it should be loose about the sleeves, so that the blood may course without hindrance, through the arteries and veins; it ought to be loose everywhere, for nature delights in freedom from restraint, and will resent, sooner or later, any interference. Oh, that a mother would take common sense, and not custom, as her guide! Inattention to this advice has caused many a little sufferer to be thrown into convulsions.

When an infant is sent out for exercise in the winter time, be sure that he is well wrapped. He ought to have under his cloak a knitted worsted sack; and if the weather is very cold, a shawl over all. He will then come from his walk refreshed and strengthened, for cold air is an invigorating tonic.

WHEN TO PUT INFANTS IN SHORT DRESSES

In the summer the right time "for shortening a babe," as it is called, is at the end of two months; in the winter, at the end of three months. But if the right time should happen to be in the spring, let it be deferred until the end of May, as the spring is usually very trying and treacherous; and sometimes, in April, the weather is almost as cold, and the wind as biting as in winter.

DIET OF AN INFANT

The infant ought not to be given the breast immediately after birth. It is advisable to wait two or three hours, that the mother may recover from her fatigue, and the babe be allowed to rest. After a good bath he will generally take the nipple with avidity.

It is often said that at so early a period there is no milk in the breast; but such is not usually the true case. There is generally a little from the very beginning, and this acts like a purgative medicine. It appears to have been intended by nature to cleanse the system of the babe. But, providing there is no real milk at first, the very act of nursing not only gives the child a motion, but at the same time causes a draught in the breast, and enables the milk to flow earlier.

If there is no milk in the breast, wait a few hours, until the milk is secreted, before applying him again to the nipple. The child will not require artificial food for at least twelve hours. In the generality of instances, artificial food is not at all necessary, but if it should be needed, a little sweetened warm water fed with a spoon, in small quantities at a time, until the milk is secreted, is all that answers all practical purposes. The infant ought to be put alternately to each breast every few hours, until he is able to find nourishment.

As a rule, when the child and the mother are tolerably strong, the child is better without artificial food until three or four months old; then it may be wise to feed him twice a day, so as gradually to prepare him to be weaned at the end of nine months.

Whatever artificial food is used it ought to be given by means of a bottle, not only as it is a more natural way than any other of feeding a baby, as it causes him to nurse as though he were drawing it from the mother's breasts, but as the act of nursing causes the salivary glands to press out their contents, which materially assists digestion; besides it seems to satisfy and comfort him more than it otherwise would do.

Never give the child the white rubber nipple nursing bottle, since it contains in its composition the carbonate of lead, which is a sure poison—

sometimes slow, but none the less sure. Use the red or the black nipple instead.

HAND-FED CHILDREN

Much of the mortality following hand-feeding may be traced to unsuitable food. Among the poorer classes especially there is a prevalent notion that milk alone is insufficient; and hence the almost universal custom of administering various farinaceous foods, such as corn flour or arrowroot, even from the earliest period. Many of these consist of starch alone, and are therefore absolutely unsuited for forming the staple of diet, on account of the total absence of nitrogenous elements. Reason as well as experience, abundantly proves that the object to be aimed at in hand-feeding is to imitate as nearly as possible the food which nature supplies for the new-born child, and therefore the obvious course is to use milk from some animal, so treated as to make it resemble human milk as nearly as may be.

As soon as the child begins to cut his teeth the case is altered, and farinaceous food, with milk and with water, becomes an absolute necessity.

ARTIFICIAL FOODS

After a child begins teething any of the following foods may be given: The food that suits one infant, however, will not agree with another. The one that I have found the most useful is made as follows: Boil the crumb of bread for two hours in water, taking particular care that it does not burn, then add only a little loaf-sugar (or brown sugar, if the bowels are costive) to make it palatable. Mix a little new milk—the milk of one cow with it—gradually as it becomes older, increase the quantity until it is nearly all milk, there being only enough water to boil the bread; the milk should be poured boiling hot on the bread. If the child is still nursing it sometimes so happens that the two milks—the mother's and the cow's milk—do not agree. In such a case, leave out the milk, both in this and in the foods following, and make the food entirely with water, instead of with milk and water. When weaned, good fresh cow's milk must, as previously recommended, be used.

FOOD NO. 2

Cut thin slices of bread into a basin, cover the bread with cold water, place it in an oven for two hours to bake; take it out, beat the bread up with a fork, and then slightly sweeten it. This is an excellent food.

FOOD NO. 3

Another good food is the following: Take about a pound of flour, put it in a cloth, tie it up tightly, place it in a saucepanful of water, and let it boil for four or five hours; then take it out, peel off the outer rind, and the inside will be found quite dry, which grate.

FOOD NO 4

An excellent food for a baby is baked crumbs of bread, prepared as follows: Crumb some bread on a plate; put it a little distance from the fire to dry. When dry, rub the crumbs in a mortar, and reduce them to a fine powder, then pass them through a sieve. Having done this, put in a slow oven, and bake until they are of a light fawn color. A small quantity of the boiled or baked flour, or the baked crumbs of bread, ought to be made into food, in the same way as gruel is made, and should then be slightly sweetened, according to the state of the bowels, either with loaf or brown sugar.

FOOD NO. 5

The following is a good and nourishing food for a baby: Soak for an hour some best rice in cold water, strain and add fresh water to the rice, then let it simmer till it will pulp through a sieve; put the pulp and the water in a saucepan, with a lump or two of sugar, and again let it simmer for a quarter of an hour; a portion of this should be mixed with one-third of fresh milk, so as to make it of the consistence of good cream. This is an excellent food for weak bowels. New milk should be added to any of the above articles of food, in a similar way to that recommended for boiled bread.

FOOD NO. 6

The following is a good food when an infant's bowels are weak and relaxed: "Into five large spoonfuls of the purest water, rub smooth one dessert-spoonful of fine flour. Set over the fire five spoonfuls of new milk, and put two bits of sugar into it; the moment it boils, pour into it the flour and water, and stir it over a slow fire twenty minutes.

Where there is much emaciation, I have found genuine arrowroot a very valuable article of food for an infant, as it contains a great deal of starch, which helps to form fat and to evolve heat; both of which a poor emaciated, chilly child stands so much in need of. It must be made with equal parts of water and of good fresh milk, and ought to be slightly sweetened with loaf sugar; a small pinch of table salt should be added to it. Arrowroot will not only give bone and muscle; but it will give—what is very needful to a delicate child—fat and warmth. It is principally composed of starch, and comes under the same category as cream, butter, sugar, oil and fat. Arrowroot should always be given with new milk (mixed with one-half of water); it will then fulfill, to perfection, the exigencies of nourishing, of warming, and fattening the child's body.

THE FOOD OF FOODS

New milk is the only food, which of itself alone, will nourish, and warm and fatten. It is, for a child, par excellence, the food of foods!

Arrowroot, and all other farinaceous foods are, for a child, only supplemental to milk. Bear in mind, and let there be no mistake about it, that farinaceous food is not suitable for a child until he begins to cut his teeth.

I have given a large and well-tried infant's dietary to choose from, as it is sometimes difficult to fix on one that will suit; but remember, if one of the above agree, keep to it, as a babe requires a simplicity in food—a child a greater variety.

A small quantity of sugar in an infant's food is requisite, sugar being nourishing and fattening, and causing cow's milk to resemble somewhat

in its properties human milk; but bear in mind, it must be used sparingly. Much sugar cloys the stomach, weakens the digestion, produces acidity, sour belchings and wind.

DENTITION AND ITS DANGERS

The period at which dentition commences is uncertain. It may be said that, as a rule, a babe begins teething when seven months old. Some have cut teeth at three months; indeed, there are instances on record of infants having been born with teeth. On the other hand, teething, in some children, does not commence until they are a year and a half or two years old, and, in rare cases, not until they are three years old. There are cases recorded of adults who have never cut any teeth.

The teeth are a fruitful source of suffering and of disease; and are with truth styled our first and our last plagues. Dentition is the most important period of a child's life, and is the exciting cause of many infantile diseases. During this period he requires constant and careful watching. When we consider how the teeth elongate and enlarge in his gums, pressing on the nerves and the surrounding parts, and how frequently they produce pain, irritation and inflammation; when we contemplate what sympathy there is in the nervous system, and how susceptible the young are to pain, no surprise can be felt at the immense disturbance, and consequent suffering and danger frequently experienced by children while cutting their first set of teeth. The complaints or diseases induced by dentition are numberless, affecting almost every organ of the body,—the brain, occasioning convulsions, water on the brain, etc.; the lungs, producing congestion, inflammation, cough, etc.; the stomach, exciting sickness, flatulence acidity, etc.; the bowels, inducing griping, at one time costiveness and at another time purging; the skin, causing eruptions.

HELPS FOR DENTITION

If you are living in town, and the baby suffers much from teething, take him into the country. It is wonderful what change of air will often do, in relieving a child who is painfully cutting his teeth. The number of

deaths in cities from teething is large, in the country it is comparatively trifling.

Should an infant be purged during teething, or any other time, I should look upon the relaxation as an effort of nature to relieve itself. A child is never purged without a cause; that cause, in most instances, is the presence of some undigested food, acidity, or depraved motions, and no astringent medicine should be given. The better plan is to give laxatives such as either olive oil, and thus work it off; apply also to the abdomen. If we lock up the bowels, we confine the enemy, and thus produce mischief. If he is purged more than usual, attention should be paid to the diet and care must be taken not to overload the stomach.

A child is subject to a slight cough during dentition, which is an effort of nature to bring up any secretion from the lining membrane of the lungs, or from the bronchial tubes, hence it ought not to be interfered with.

DRIBBLING BIBS

A child who is teething dribbles, and thereby wets his chest, which frequently causes him to catch cold. The best remedy is to have in readiness several flannel dribbling bibs, so that they may be changed as often as they become wet; or, if he dribbles very much, the oiled silk bibs may be used, instead of the flannel ones.

A child, during teething, should have little fruit, unless it is a roasted apple, the juice of five or six grapes—taking care that he does not swallow either the seeds or the skin—the inside of ripe gooseberries, or an orange. Such fruits, if the bowels are in a costive state, will be particularly useful.

TREATMENT FOR CONVULSIONS

If teething causes convulsions, the first thing to be done is to freely dash water upon the face, and sponge the head with cold water. As soon as warm water can be procured, put the child into a warm bath of 98 degrees Fahrenheit. If a thermometer is not at hand, plunge your elbow into the water; a comfortable heat for your elbow will be a proper heat for the infant. He must remain in the bath for a quarter of an hour, or until

the fit is at an end. The body must be wiped with warm, dry, coarse towels after coming out of the bath, then placed in a warm blanket, and give him the following. A tea made of camomile blossoms steeped in a little water, strained and sweetened. Dose, 2 teaspoonfuls every 30 minutes or more if he craves it. Cold water should be applied to the head.

It may be well, for the comfort of a mother, to state that a child in convulsions is perfectly insensible to all pain whatever; indeed, a return to consciousness speedily puts convulsions to the rout.

THE BABE'S BEST GUM STICK

When a baby is cutting his teeth there is no objection to his sucking his thumb. His thumb is the best gum stick in the world; it is convenient; it is handy (in every sense of the word); it is of the right size, and of the proper consistency, neither too hard nor too soft; There is no danger, as of some artificial gum-sticks, of its being swallowed, and thus of its choking the child. The sucking of the thumb causes the salivary glands to pour out their contents, and thus not only to moisten the dry mouth, but assist the digestion; the pressure of the thumb eases the pain and irritation of the gums, and helps to bring them through the gums. Sucking of the thumb will often make a cross infant contented and happy, and will frequently induce a restless baby to fall into a sweet, refreshing sleep. After he has cut the whole of his first set of teeth, if it is likely to become a habit, he may be readily cured by making a paste of aloes and water, and smearing it upon his thumb. One or two dressings will suffice, as after tasting the bitter aloes he will take a disgust to his former enjoyment, and the habit will be broken.

ERUPTIONS DURING DENTITION

A child while teething, is subject to eruptions, more especially behind the ears—which is most disfiguring, and frequently very annoying. Apply no external application. If the breaking-out were repelled, either convulsions, or bronchitis, or inflammation of the lungs, or water on the brain, would be the consequence. The only plan to adopt be more careful in diet; give him less meat (if he is old enough to eat animal food).

EXERCISE FOR AN INFANT

I am a great advocate of exercise in the open air. "The infant makes known its desire for fresh air, by restlessness; it cries, for it cannot speak its wants; is taken abroad, and is quiet." The age at which an infant ought to commence taking exercise will depend upon the season and the weather. If in summer, and the weather fine, he should be carried in the open air, a week or two after birth, but if it is winter, he ought not on any account be taken out under a month, and not even then, unless the weather is mild for the season, and during the middle of the day. At the end of two months he should breathe the open air more frequently. After the expiration of three months he ought to be carried out every day. By doing this we make him strong and hearty, and give the skin that mottled appearance which is so characteristic of health. He must, of course, be well clothed.

I must express my disapprobation of smothering an infant's face with a veil, or any other covering when taken into the air. If his face is so muffled up, he may as well remain at home. It is impossible for him to receive any benefit from the invigorating effects of the fresh air.

He must be encouraged to use muscular exertion; and for this purpose, he ought to be frequently laid upon a rug, or carpet, or the floor, where he can stretch his limbs and kick about with perfect glee. He crows with delight, and thoroughly enjoys himself; it strengthens his back, it enables him to stretch his limbs, and to use his muscles, and is one of the best kinds of exercise a very young child can take. While going through this exercise his diaper should be unfastened, in order that he may be untrammeled. By adopting the above plan the babe quietly enjoys himself—his brain is not over excited by it. This is an important consideration, for both mothers and nurses are apt to rouse and excite very young children to their manifest detriment. A babe requires rest, and not excitement. In the early period of his existence his time ought to be almost entirely spent in sleeping and in nursing!

Some mothers or nurses amuse their children by tossing them. Can

anything be more cruel or absurd? Violent tossing of a young babe ought never to be allowed; it has been known to bring on convulsions.

WARMTH REQUIRED BY AN INFANT

A new-born babe ought to be kept comfortably warm, but not very warm. It is folly in the extreme to attempt to harden a very young child either by allowing him, in the winter time, to be in a bedroom without a fire, or by dipping him in cold water, or by keeping him with scant clothing on his bed. The temperature of a bedroom in winter should be, as nearly as possible, at 60 degrees Fahr. Although the room should be comfortably warm, it ought from time to time to be properly ventilated. An unventilated room soon becomes foul and unhealthy. How many in this world, both children and adults, are poisoned with their own breaths!

A babe ought not to sleep alone from the first, say, for the first few months—he requires the warmth of another person's body, especially in the winter.

An infant should not be allowed to look at the glare of a fire or a lighted candle, as it tends to weaken the sight, and sometimes brings on inflammation of the eyes. In speaking to, and in noticing a baby, you ought always to stand before, and not behind him, or it might make him squint.

MISCELLANEOUS SUGGESTIONS FOR CARE OF INFANTS

I do not approve of rocking an infant to sleep. If the rules of health are observed, he will sleep soundly and sweetly without rocking; if they are not, the rocking might cause him to fall into a feverish, disturbed slumber, but not into a refreshing, calm sleep. Besides, if you begin that habit, he will not go to sleep without it.

If the head of the crib is covered, the babe cannot breathe freely; the air within the crib becomes contaminated, and thus the lungs cannot properly perform their functions. If his sleep is to be refreshing, he must breathe pure air. I do not even approve of a head to a crib. An infant must have the full benefit of the air of the room; indeed, the bedroom

door ought to be frequently left slightly open, so that the air of the apartment may be changed; taking care, of course, not to expose him to a draught. If the flies annoy him while he is asleep, let a net veil be thrown over his face, as he can readily breathe through net, but not through a handkerchief.

HABITS OF NEATNESS

A babe of three months and upward, ought to be taught to use the chamber and not the napkin for the purpose of moving the bowels. He ought to be held over one at least six times during the twenty-four hours; if such a plan were adopted, diapers might at the end of three months be dispensed with—a great desideratum—and he would be inducted into clean habits—a blessing to himself, a comfort to all around, and a great saving of dresses and of furniture. Teach the children to be clean. An unclean child is the mother's disgrace. Napkins should be rinsed each time after the babe has urinated upon them. They are healthier and sweeter in every way. It generally prevents chafing.

TREATMENT FOR CHAFING

The want of water, inattention, and want of cleanliness are the usual causes of chafing. The chafed parts ought to be well and thoroughly sponged with tepid rain water—allowing the water from a well-filled sponge to stream over them—and, afterward, they should be thoroughly, but tenderly dried with a soft towel, and then oiled with vaseline and dusted with finely-powdered starch.

ENEMAS FOR INFANTS

If an infant's bowels are habitually costive, try the effects of a warm water enema. Let three or four, or even more tablespoonfuls (according to the age of the infant) of warm water be administered. If the first enema does not have the desired effect, let a second, a third, or even more, be used, as no harm can possibly arise from so simple a remedy. The effect of an enema is simply to wash out the bowels—to remove any offending motion pent up therein, and it does not at all interfere either with the

appetite, with the digestion, or with increasing the obstinacy of the bowels, as a repetition of cathartics assuredly will do. An enema gives no pain, can never do harm, and is administered in a few seconds. Truly, a warm water enema is a splendid remedy for opening a child's costive bowels.

Drinking a dessertspoonful or a tablespoonful of cold water the moment a babe awakes in the morning, and every morning of his life, increasing the quantity as he grows older, is another admirable remedy for relaxing costive bowels. The warm water enema and the drinking of cold water in the morning, are both simple remedies, and can never do harm, which is more than can be said of the nauseous and powerful drugs that are sometimes poured down poor unfortunate children's throats!

FLATULENCE OR WIND ON THE STOMACH

Flatulence most frequently occurs in those infants who live on artificial food, especially if they are over-fed. One of the best and safest remedies for flatulence is Sal-volatile—a teaspoonful of a solution of one dram to three ounces of water. Or, a little dill or aniseed may be added to the food—half a teaspoonful of dill water. Or, take twelve drops of oil of dill, and two lumps of sugar; rub them well in a mortar together; then add, drop by drop, three tablespoonfuls of spring water; let it be preserved in a bottle for use. A teaspoonful of this, first shaking the vial, may be added to each quantity of food. Or, three teaspoonfuls of bruised caraway seeds may be boiled for ten minutes in a teacupful of water, and then strained. One or two teaspoonfuls of the caraway tea may be added to each quantity of his food, or a dose of rhubarb and magnesia may occasionally be given.

Warm olive oil, well rubbed, for a quarter of an hour at a time, by means of the warm hand, over the bowels, will frequently give relief. Turning the child over on his bowels, so that they may press on the nurse's lap, will often afford great comfort. A warm bath generally gives immediate ease in flatulence; it acts as a fomentation to the bowels.

Another excellent remedy is the hot compress. Soak a piece of flannel, folded into two or three thicknesses, in warm water; wring it tolerably dry, and apply as hot as the child can comfortably bear it to the bowels.

then wrap him in a warm, dry blanket, and keep him, for at least half an hour, enveloped in it. Under the above treatment he will generally soon fall into a sweet sleep, and awake quite refreshed.

HICCOUGHS

Hiccough is of such a trifling nature as hardly to require interference. It may generally be traced to over-feeding. Should it be severe, a teaspoonful of water with a little sugar are all that will be necessary.

INFANTILE DIARRHŒA, OR CHOLERA INFANTUM

is one of the most frequent and serious of infantile diseases, and carries off more children than any other complaint.

Before describing the symptoms, it may be well to state that a child, when well, should have from three to six motions in twenty-four hours; they ought to have a faint and peculiar, but not a strong and disagreeable odor. If there is a strong and disagreeable smell, the child is not well, and the case should be investigated, more especially if there are either curds or lumps in the motions; these latter symptoms denote that the food has not been properly digested.

If the infant, instead of having from three to six motions, should have more than double the number, if they are more watery, if they become slimy and green, or green in part and curdled, if they have an unpleasant smell, if he is sick, cross, restless, and fidgety, if every time he has a motion he is griped and in pain, he is troubled with diarrhœa, and it will be wise to let him drink plentifully of camomile tea made from the blossom. Put upon the abdomen hot fomentations of hops and a hot water bag to the feet.

Should there be both blood and slime mixed with the stool, the case becomes more serious; still, with proper care, relief can generally be quickly obtained. If the evacuations—instead of being stool—are merely blood and slime, and the child strains frequently and violently, endeavoring thus to relieve himself, crying at each effort, the case assumes the character of dysentery. Drink freely of camomile tea, keep the feet warm and take

of the syrup of rhubarb and magnesia a teaspoonful every hour. Place also warm fomentations to the bowels. Hops or smartweed are most excellent.

DIARRHŒA AND HOW TO TREAT IT

The causes of diarrhœa are improper food, over-feeding, teething, cold, the mother's milk from various causes disagreeing, namely, from her being out of health, eating unsuitable food, taking improper and drastic purgatives, or nursing her child when she is pregnant. Of course, if any of these causes are in operation, they ought to be remedied, or medicine to the babe will be of little avail.

If the case is slight, and has lasted two or three days, do not interfere by giving medicine at first; if the cause is some acidity or vitiated stool that should be eliminated, the best treatment is to assist nature by giving either a dose of olive oil, or a moderate one of rhubarb and magnesia syrup (obtainable at any drug store), and thus to work off the enemy.

HIVES OR NETTLE RASH AND ITS CURE

Hives or nettle rash consists of several irregular, raised wheals, red at the base, and white on the summit, on different parts of the body; but it seldom attacks the face. It is not contagious, and it may occur at all ages and many times. It comes and goes, remaining only a short time in a place. It puts on very much the appearance of the child having been stung by nettles—hence its name. It produces great heat, itching and irritation, sometimes to such a degree as to make him feverish, sick, and fretful. The babe is generally worse when he is warm in bed, or when the surface of his body is suddenly exposed to the air. Rubbing the skin, too, always aggravates the itching and the tingling, and brings out a fresh crop. The cause may commonly be traced to improper feeding; although occasionally it proceeds from teething.

It is a complaint of no danger, and readily gives way to a mild aperient, and to attention to diet. There is nothing better to relieve the irritation of the skin than a warm bath, into which has been thrown a tablespoonful of powdered borax.

Stuffiness of the nose in a new-born babe may be prevented by rubbing a little tallow on the bridge of the nose. This is the old-fashioned remedy, and answers the purpose. It ought to be applied every evening just before putting him to bed. If the stuffing is severe, dip a sponge in hot water, as hot as he can comfortably bear; ascertain that it is not too hot; then put it for a few minutes to the bridge of his nose. As soon as the hard mucus is within reach, it should be carefully removed.

THRUSH AND HOW TO CURE IT

The thrush is a frequent disease in infancy, and is often brought on either by stuffing or by giving improper food. A child brought up entirely, for the first three or four months, on the breast, seldom suffers from this complaint. The thrush consists of several irregular, roundish, white specks on the lips, the tongue, the inside, and the angles of the mouth, giving the parts affected the appearance of curds and whey having been smeared upon them. The mouth is hot and painful, and he is afraid to nurse; the moment the nipple is put in his mouth he begins to cry. The thrush sometimes, though rarely, runs through the whole of the alimentary canal. It should be borne in mind that nearly every child who is nursing has the thrush at some time. It may be mild or very severe.

Thrush is generally due to improper food. If the child is at the breast, keep him, for a time, entirely to it. Do not let him nurse continually, as that will not only fret his mouth but irritate and make sore the mother's nipple.

If he is not at the breast, but has been weaned, then keep him for a few days entirely on a milk diet—the milk of one cow—either boiled, if it is hot weather, to keep it sweet, or unboiled in cool weather—fresh as it comes from the cow, mixed with lime water in the proportion of two parts of milk to one of lime water.

The best medicine is the old-fashioned one of borax, a combination of powdered lump sugar and borax being a good one for the purpose; the powdered loaf sugar increases the efficacy and the cleansing properties of the borax.

The best local remedy is honey and borax, which ought to be smeared frequently, by means of the finger, on the parts affected. Thorough ventilation of the apartments must be observed; and great cleanliness of the vessels containing the milk should be insisted upon. In a bad case of thrush, change of air to the country is most desirable; the effect is sometimes truly magical.

BABY'S FIRST STEPS

If a baby's ankles are weak, let them every morning be bathed, after the completion of his morning's ablution, for five minutes each time, with sea salt and water, a small handful of sea salt dissolved in a quart of rain water, then let them be dried.

Do not let him be put on his feet early; but allow him to crawl and sprawl and kick about the floor, until his body and ankles become strong.

Let him wear shoes with straps over the insteps to keep them on, and not boots; boots will only increase the weakness of the ankles.

In concluding this part of my subject, I beg to remark, there are four things essentially necessary to a babe's well doing, namely, plenty of water for his skin; plenty of fresh genuine milk mixed with water for his stomach (giving him only his mother's milk during the first six, eight, or nine months of his existence); plenty of pure air for his lungs, and plenty of sleep for his brain; these are the four grand essentials; without an abundance of one and all of them, perfect health is utterly impossible. Perfect health! the greatest earthly blessing, and more to be coveted than aught else beside. There is not a more charming sight in the universe than the beaming face of a perfectly healthy babe.

CHAPTER XVIII

NURSING OF INFANTS

AS MOTHERHOOD is the sweetest thing in the world, a mother blessed with health and strength, and a good breast of milk, would be most unnatural and cruel if she did not nurse her own child. Those mothers who nurse and cherish their own offspring are not only more truly mothers, but they have a double reward in that, while their children thrive and thus gladden their hearts, they themselves are also very materially benefited. A mother, too, who does not nurse her child is very likely soon to be in the family way again. This is an important consideration, as frequent child-bearing is much more weakening to the constitution than is the nursing of children. Indeed, nursing, as a rule, instead of weakening, strengthens the mother's frame exceedingly, and assists her muscular development.

THE BREAST

As soon as the patient has recovered from the fatigue of labor—say, in about four to six hours—attention ought, especially in a first confinement, to be paid to the breasts. In the first confinement there is, until the third day, but very little milk; although there is usually on that day, and for two or three days afterward, a great deal of swelling, hardness, distension, and uneasiness of the breasts; in consequence of which, both care and attention are needed. Not only this, but there is frequently a degree of feverishness, which, in some cases, is rather severe, amounting even to what is called milk fever.

If there is milk in the breast, which may be readily ascertained by squeezing the nipple between the finger and the thumb, the infant should at first be applied, not frequently, but at considerable intervals, say until the milk is properly secreted, every four hours. When the milk flows, the child ought to be applied more frequently, but still at stated times.

To wash away any viscid mucus from the nipple, or any stale perspiration, the breasts and nipples should be sponged with a little warm water, and dried with a warm, soft napkin. Some infants are so particular, that, unless the breasts are perfectly free from stale perspiration, and the nipples from dried-up milk, they will not nurse. If after the above cleansing process, there is any difficulty in making him nurse, smear a little cream on the nipple, and then immediately apply him to it.

MILK-DUCTS IN THE HUMAN MAMMA.

If the breasts are full, hard, knotty, and painful, which they generally are two or three days after a first confinement, let them be well but tenderly rubbed every four hours, with the best olive oil or with equal parts of olive oil and of eau de cologne, which should be well shaken in a bottle every time before using.

MILK FEVER

On the third day, more especially after a first confinement, the breasts are apt to become very much swollen, painful and distended. If such is the case, it may be necessary, for a few days, to have them drawn once or twice daily. There are breast pumps for this purpose found at all drug stores.

If the breasts are more than usually large and painful, in addition to assiduously using the above liniment, apply to the breasts, in the intervals, young cabbage leaves, which should be renewed after each rubbing. Before applying them, the veins of the leaves should with a sharp knife be cut smooth—level with the leaf. It will require several, as the whole of the breast ought to be covered. The cabbage leaves will be found both cooling and comforting.

While the breasts are full and uncomfortable the patient ought not to drink much fluid, as it encourages a larger secretion of milk. When the secretion of milk is at its height, she ought, during the day, to take: Tinct. of aconite, 4 drops, in full glass of water. Dose, 2 teaspoonfuls every hour.

The size of the breasts under the above management will soon decrease, all pain will cease, and the infant will, with ease and comfort, take the breast.

SECOND AND SUCCEEDING CONFINEMENTS

If the breasts are comfortable (which in the second and in succeeding confinements they probably will be), let nothing be done, except as soon as the milk comes, at regular intervals, apply the child alternately to each of them. The child will, as a rule, be the best and the only doctor the bosoms require.

STATED TIME FOR NURSING

After the babe has been oiled, he generally falls asleep, and sleeps for several hours. It is not necessary to arouse him from his slumber to give him sustenance—certainly not; the mother's milk is not always ready for him; but as soon as it is, he instinctively awakes, and becomes importunate, and cries until able to obtain it. Nature—beneficent Nature—if we

will but listen to her voice, will usually tell us what to do and what not to do.

A mother ought to nurse her babe at stated times. It is a bad habit to give the breast every time a child cries, regardless of the cause; for be it what it may—over-feeding, griping, wind, or acidity—the breast is not a panacea for all his sufferings. A mother generally nurses her infant too often—having him almost constantly at the breast. This practice is injurious both to parent and to child. During the first month, the child should be nursed about every hour and a half; the second month, every two hours; gradually increasing, as he becomes older, the distance of time between, until at length he has the breast about every four hours. If nursed at stated periods, he will only look for it at those times, and be satisfied.

A mother frequently allows her babe to nurse a great part of every night. This plan is hurtful both to herself and the child; it weakens her, and thus enfeebles him; it robs them both of their sleep, and generates bad habits, which will be difficult to break; it often gives the mother a sore nipple and the child a sore mouth; it sometimes causes the mother to have a gathered breast, and fills the child with wind. It is surprising how soon an infant may, by judicious management, be brought into good habits; it only requires, at first, a little determination and perseverance.

A mother should not, directly after taking a long walk, and while in a state of violent perspiration, give her babe the breast; the milk, being at that time in a heated state, will disorder the child's bowels, or it may originate some skin disease, and one difficult to cure. She ought before giving him the breast, to wait until the surface of her body be moderately cool, but not cold. Let her be careful not to sit in draughts.

CLOTHING FOR NURSING MOTHER

A nursing mother ought to have her dress made loose and comfortable. If not in the habit of wearing a flannel waistcoat, she ought at least to have the breast covered with flannel, taking care that there is a piece of soft linen over the nipples.

DIET WHILE NURSING

Some persons consider that no care is required in the selection of food, and that a nursing mother may eat anything, be it ever so gross and unwholesome; but if we appeal to reason and facts, we shall be borne out in saying that great care is required. It is well known that cow's milk partakes of the properties of the food on which the animal lives. Thus, if a cow is fed on swedes, the milk and the butter will have a turnipy flavor. This, beyond a doubt, decides that the milk does partake of the qualities of the food on which she feeds. The same reasoning holds good in the human species, and proves the absurdity of permitting a nursing mother to eat anything and everything. Again, either a dose of purgative medicine or greens eaten at dinner, will sometimes purge the babe as violently, or even more so, than the mother herself. A babe nursed by a mother who lives grossly is more prone to disease, particularly to skin diseases, and to inflammatory complaints, and to diseases which are difficult to subdue. On the other hand, a nursing mother, who lives on nourishing diet, yet simply and plainly, has usually the purest, as well as the most abundant, supply of milk.

ATTACKS OF DEPRESSION

A mother who is nursing is at times liable to attacks of depression. Let me strongly urge the importance of her abstaining from wine and from all other stimulants as a remedy; they only raise the spirits for a time and then depress them in an increased ratio. Either a drive in the country, a short walk, a cup of tea, cocoa or milk, or a chat with a friend, is the best medicine. Outdoor exercise during nursing cannot be too strongly urged; it is the finest kind of medicine both for babe and mother. It is utterly impossible for a nursing mother to make good milk unless she takes an abundance of exercise, and breathes plenty of fresh air.

Carriage riding, if the weather is hot and sultry, is preferable to walking; if that is not practicable, she ought to have the windows thrown wide open, and should walk about the hall, and the rooms. Although carriage

exercise during intensely hot weather is preferable to walking exercise, yet walking must, during some portion of the day, be practiced. There is no substitute, as far as health is concerned, for walking.

OCCUPATION

I strongly recommend a nursing mother to attend to her household duties. She is never so happy, nor so well, as when her mind is moderately occupied with something useful. She never looks so charming as when attending to the little cares of her home. Bustling occupation—real downright work, either in the form of outdoor exercise, or of attending to household duties, is the best producer of a good breast of milk, and healthy children of anything within my knowledge. The Almighty is no respecter of persons. He has ordained that work shall be the lot of man, and of woman too! It is a blessed thing to be obliged to work. If we do not work, we have to pay a heavy penalty in the loss of both health and happiness. Work is the grand cure of all the maladies and miseries that ever beset mankind. "Nature has made occupation a necessity; society makes it a duty; habit may make it a pleasure."

TREATMENT OF SMALL AND RETRACTED NIPPLES

The baby ought to nurse by means of a glass nipple shield, placed over the nipple. I have known many mothers able to nurse their children with this invention, who otherwise would have been obliged to have weaned them, or to have procured the assistance of a wet nurse. The above aid, in the generality of instances, will enable the infant to nurse with ease. After this has been used for a time, the nipples will be so improved as to render the continuance of it unnecessary.

Another simple way of drawing out the nipple is to hold the bowl of a common clay pipe (new) over the nipple and then another person by drawing upon the stem can, by repeating this process a few times, permanently develop the nipple.

The following is an excellent remedy for retracted nipples: Apply a zone of collodion, an inch or two wide around the nipple—at the distance of half an inch. This has been found a very efficient remedy. The applica-

tion may be made with a camel's hair brush or with the finger. Collodion is harmless in its effect, and can be applied often, till desired result is attained.

As soon as the nipple is sufficiently drawn out, the nipple shield should be dispensed with. When the infant is not at the breast a metallic shield should be worn. Small, bad and sore nipples have, by wearing these shields, frequently been drawn out and made good ones; the dress will suffice to keep them in their places. These shields are very cooling and healing; and serve to keep off all pressure from the clothes; they will frequently cure sore nipples when other remedies have failed.

TREATMENT OF SORE NIPPLES

If a woman, during the latter months of pregnancy, were to adopt means to harden the nipples, sore nipples during nursing would not be so prevalent as they now are. A frequent cause of a sore nipple is a result of the babe having the thrush. It is folly to attempt to cure the nipple, without at the same time, curing the mouth of the infant. One of the best remedies for a sore nipple is the following: Borax, one dram; powdered starch, seven drams. Mix. A pinch of the powder to be frequently applied to the nipple.

The following remedy for sore nipple is also very good: Finely-powdered gum arabic, half an ounce; powdered alum, five grains. Mix well together to make a powder. A pinch of it to be frequently applied to the sore nipple.

There is nothing in either of the above powders injurious to the infant, therefore not necessary to be wiped off, before applying him to the breast. Indeed, the former one, as it contains borax, is likely to be of service both in preventing and in curing the sore mouth of the child.

Sometimes pure glycerine, with a few drops of tinct. of hydrastin, painted on the sore nipple, does the most good.

TREATMENT OF CRACKED AND FISSURED NIPPLES

Sometimes the nipple is sore from having either cracks or fissures upon it. These cracks or fissures may attack any part of the nipple, but are

very apt to form where the nipple joins the breast. A good remedy for a cracked and fissured nipple is for the infant to nurse through a nipple shield; and every time, directly after the babe has nursed, apply to the parts affected the above lotion. When the child is not at the breast the metallic shield should be worn.

A nursing mother is sometimes annoyed by the milk flowing away constantly, making her wet and uncomfortable. All she can do under such circumstances is to wear nipple glasses, and to apply a piece of flannel to the bosom, which will prevent the milk from chilling her, and will thus do away with the danger of her catching cold, etc.

If there is a supply of milk in the breasts, and the child will not nurse, the doctor's attention ought to be drawn to the fact, in order that he may ascertain whether the babe is tongue-tied; if he is, a trifling, painless operation will soon make all right.

GATHERED BREAST

A healthy woman with a well-developed breast and a good nipple scarcely, if ever, has a gathered breast. A gathered breast is likely to occur, if ever, during the first month of a first confinement. Great care, therefore, ought to be taken to avoid such misfortune. A gathered breast is frequently owing to the carelessness of a mother in not covering her breast while nursing.

A sore nipple is another fruitful cause of a gathered breast. A mother, in consequence of the suffering it produces, dreads putting the babe to it; she therefore keeps him almost entirely to the other breast. The result is, the breast becomes distended with milk, which, being unrelieved, ends in inflammation, and subsequently in gathering.

There are two forms of gathered breast; one being of vast, and the other of trifling importance. The first, the serious one, consists of gathering of the structure of the mammary gland; the latter merely of the superficial part, and ought to be treated in the same manner as any other external gathering, with warm poultices. In the mild or superficial kind of gathered breast, the mother may still persevere in nursing her child,

as the secreting portion of the breast is not at all implicated in the gathering; but in the severe form, she ought not to do so, but should instantly wean her child from the affected side. The healthy breast she may continue to nurse from.

TREATMENT OF GATHERED BREAST.

A severe gathered breast is always ushered in with a severe chill; the more severe the gathering, the longer the chill lasts. Let this fact be impressed deeply upon the mother's mind, as it admits of no exception. This shivering is either accompanied or followed by sharp, lancinating pains. The breast now greatly enlarges, becomes hot, and is very painful. The milk in the affected breast either lessens or entirely disappears. If the child is applied to the breast (which ought not to be), it gives the mother intense pain. She is feverish and ill, she is hot one minute, and cold the next—feeling as though cold water were circulating with the blood in her veins; she loses her strength and appetite, and is very thirsty; she is, in fact, ill.

If a doctor is summoned at the very onset of the chill, he will probably be able to prevent a gathered breast. If twelve hours elapse after the chill has taken place, the chances are that the gathering cannot be prevented; although, even then, it may, by judicious treatment, be materially lessened.

When once a woman has had the severe form of gathered breast, she ought, in all subsequent confinements, before nursing her babe, to obtain the express permission of the doctor to do so, or she may have a return of the gathered breast, and the concomitant pain, misery and annoyance. The reason of the above is obvious—the function of the breast, in a severe gathering, might be irreparably injured; so that, in all subsequent confinements, the very attempt of nursing may, instead of inducing secretion of milk, set up inflammatory action, terminating in gathering of the breast again.

TREATMENT OF FAINTING WHILE NURSING

When a nursing mother feels faint, she ought immediately to lie down and take a little nourishment; a cup of beef tea with the yolk of an egg beaten in it, will answer the purpose extremely well. She is sometimes

faint from nursing her child oftener than four hours. As long as she continues this foolish practice, she must expect to suffer from faintness. When a nursing mother feels faint it is often an indication that the child is robbing her strength, and tells her, in unmistakable language, that she must give him artificial food, or wean him altogether.

The less laxative medicine a nursing mother takes, the better will it be for herself and her infant. If the bowels will not act, an enema is by far the best remedy; you can never do any harm, either to the mother or to the babe, by the administration of an enema.

CHAPTER XIX

WEANING

THERE is an old saying, "That a woman should carry her child nine months, and should nurse him nine months." It is well known that the first part of the old adage is correct, and experience has proved the latter to be equally so. If a babe is weaned before he is nine months old he loses that muscular strength which the breast milk alone can give; if he is nursed after he is nine months, he becomes pallid, flabby, weak and delicate. It is generally recognized that the healthiest children are those weaned at nine months complete. Prolonged nursing hurts both child and mother; in the child, causing a tendency to brain disease, probably through disordered digestion and nutrition; in the mother, causing a strong tendency to deafness and blindness.

TIME FOR WEANING

The time when an infant should be weaned must depend upon the strength of the child, and upon the health of the mother; nine months on an average being the proper time. If the mother is delicate, it may be found necessary to wean him at six months; or if he is weak, or laboring under any disease, it may be well to continue nursing him for twelve months; but after that time the breast will do him more harm than good, and will injure the mother's health. If nursed after he is twelve months old, he is generally pale, flabby, unhealthy, and rickety; and the mother is usually nervous, emaciated, and hysterical. A child who is nursed beyond the proper time, more especially if there is any predisposition, sometimes dies either of water on the brain, of consumption, or of mesenteric disease.

HOW TO WEAN AN INFANT

The mother must, as the word signifies, wean the child gradually—that is, she should by degrees give him less and less of the breast, and more

and more of artificial food; she ought at length only to nurse him at night, and lastly, it would be well for the mother either to send him away or to leave him at home, and for a few days go away herself. Another good plan is to have in the bed a half-pint bottle of new milk, which, to prevent it from turning sour, should be previously boiled, so as to give a little to the child in place of the breast. The warmth of the body will keep the milk of a proper temperature, and will supersede the use of lamps and all other troublesome contrivances.

If the mother is not able to leave home, or to send her child from home, she ought to let him sleep in another room, with some responsible person.

If the mother, during the daytime, cannot resist having the child in the room with her, then I should advise her to make a paste of aloes—mix a little powdered aloes with a few drops of water, until of the consistence of paste—and smear a little of it on the nipple every time just before putting him to the breast; this will be quite enough, and one or two aloe-applications to the nipple will make him take a disgust to the breast; and thus the weaning will be accomplished. A mother need not be afraid that the aloes will injure her babe; the minute quantity he will swallow will do no harm; for the moment he tastes it, the aloes being extremely bitter, he will sputter it out of his mouth.

The best way of drying up the milk gradually is to apply with the hand a weak solution of camphor.

SYMPTOMS DENOTING THE NECESSITY OF WEANING

A mother sometimes cannot nurse her child; the attempt bringing on a train of symptoms somewhat similar to the following—ringing in the ears; dimness of sight, aching of the eyeballs, throbbing in the head, nervousness, hysterics, tremblings, faintness, loss of appetite and of flesh, fluttering and palpitation of the heart, feelings of great exhaustion, indigestion, costiveness, sinking sensations of the stomach, pains in the left side, great weakness and dragging pains of the loins, which are usually increased whenever the infant is put to the breast; pallor of the countenance, shortness of breath, swelling of the ankles.

Every mother who is suffering from nursing does not have the whole of the above long catalogue of symptoms! But if she has three or four of the more serious of them, she ought not to disobey the warnings, but should discontinue nursing; although it may be necessary, if the babe is not strong enough to wean, to obtain a healthy wet nurse to take her place or give him from the bottle cow's milk sterilized.

If there is during any period of nursing a sudden and great diminution of milk in the breasts, the chances are that the mother is again enciente; the child should be weaned. It is most injurious both to parent and to child, for a mother, when she is pregnant, to continue nursing.

RETURN OF MENSES AFTER NURSING

Soon after nine months' nursing the monthly periods generally return. This is another warning that the babe ought immediately to be weaned, as the milk will lessen both in quantity and in nourishment, and the child in consequence will become delicate and puny, and every day he is nursed will lose, instead of gain, ground.

CHAPTER XX

CHILDREN AND THEIR DISEASES

LET a child's home be the happiest house to him in the world. It is sad enough to see dismal, doleful men and women, but it is truly lamentable to see a doleful child. The young ought to be as playful and as full of innocent mischief as kittens. There will be quite time enough in after years for sorrow and for sadness.

Bright colors, plenty of light, clean windows, an abundance of good colored prints, and toys without number, are the proper furnishings of a nursery. Nursery! why, the very name tells you what it ought to be—the home of childhood—the most important room in the house—a room that will stamp the character of your child for the remainder of his life. The mother should be the head nurse, all that is required is some one to take the drudgery off her hands. A nurse girl should be steady, lively, truthful, and good tempered; she should be free from any natural imperfection, such as squinting, stammering, for a child is such an imitative creature that he is likely to acquire that defect which in the nurse is natural. Children, like babies, are quick at taking notice. What they see they mark, and what they mark they are very prone to copy. Never should the nurse be permitted to tell her little charge frightful stories of ghosts and hobgoblins; if this is allowed, the child's disposition will become timid and wavering, and may continue so for the remainder of his life.

If children were not terrified by such stories, darkness would not frighten them more than the light. The mind, thus filled with fear, acts upon the body, and injures the health. A child should never be placed in a dark cellar, nor frightened by tales of rats, etc. Instances are related of fear thus induced impairing the intellect for life, and there are numerous examples of sudden fright causing a dangerous and even fatal illness.

It is the little pleasures of a child that constitute his happiness. Great pleasures come but seldom, and are the exception, and not the rule.

NURTURED IN LOVE

Let a child be nurtured in love. "It will be seen," says the author of John Halifax, "that I hold this law of kindness as the Alpha and Omega of education. I once asked one, in his own house, a father in everything but the name, his authority unquestioned, his least word held in reverence, his smallest wish obeyed—'How did you ever manage to bring up these children?' He said, 'By love.' "

Let every word and action prove that you love your children. Enter into all their little pursuits and pleasures. Join them in their play, and be a child again. If they are curious, do not check their curiosity, but rather encourage it; for they have a great deal—as we all have—to learn, and how can they know if they are not taught?

Does not almost everybody remember some kind-hearted man who showed him or her a kindness in the dulcet days of childhood? The writer of this recollects, at this moment, a barefooted girl, standing at the wooden fence of a poor little garden in his native village, while, with longing eyes, she gazed on the flowers which were blooming quietly in the brightness of the Sabbath morning. The possessor came from his little cottage. He was a wood-cutter by trade, and spent the whole week at work in the woods. He had come into the garden to gather flowers to stick in his coat for church. He saw the child, and breaking off the most beautiful of his carnations, gave it to her. Neither the giver nor the receiver spoke a word, and with bounding steps she ran home. And now here, at a vast distance from that home, after so many events of so many years, the feeling of gratitude which agitated the breast of that girl, expresses itself or paper. The carnation has long since faded, but it now bloometh afresh.

Never allow a child to be teased; it spoils his temper. If he is in a cross humor take no notice of it, but divert his attention to some pleasing object. This may be done without spoiling him. Do not combat bad temper with bad temper—noise with noise. Be firm, be kind, be gentle,

be loving, speak quietly, smile tenderly, and embrace him fondly, but insist upon implicit obedience, and you will have, with God's blessing, a happy child.

Speak gently to a child; speak gently to all; but more especially speak gently to a child. There must be neither snarling, nor snapping, nor snubbing, nor loud contention toward him. If there is it will ruin his temper and disposition, and will make him hard, harsh, morose and disagreeable.

TEACH BY EXAMPLE

Do not tell your child how wicked he is; what a naughty boy he is; that God will never love him, and all the rest of such twaddle. Such conversation, like constant droppings of water, will make an impression, and will cause him to feel that it is no use to try to be good—that he is hopelessly wicked. Instead of such language, give him confidence in himself; rather find out his good points and dwell upon them; praise him where and whenever you can; and make him feel that, by perseverance and by God's blessing, he will make a good man. Speak truthfully to your child; if you once deceive him, he will not believe you for the future.

Have no favorites, show no partiality; for the young are very jealous, sharp-sighted and quick-witted, and take a dislike to the petted one. Do not rouse the old Adam in them. Let children be taught to be "kindly affectionate one to another with brotherly love;" let them be encouraged to share each other's toys and playthings, and to banish selfishness.

BATH FOR CHILDREN

A child ought not be bathed when in a state of perspiration, nor while he is perspiring violently, ill consequences are apt to ensue. The blood would be sent from the skin to some internal vital part, and thus be likely to light up inflammation—probably of the lungs. As the summer advances, less and less warm water is required, so that at length none is needed.

If a child is delicate, either a handful of table salt, or a half handful of sea salt, added to the water will prove strengthening.

Two warm baths per week are quite sufficient for cleanliness. These baths should take place just before retiring. A cold sponge bath in the morning on arising is always to be recommended.

DRESS FOR CHILDREN

Children, boys and girls, especially if they are delicate, ought always to wear high dresses up to their neck. The exposure of the upper part of the chest is dangerous. It is in the upper part of the lungs, in the region of the collar bones, that consumption first shows itself. The clothing of the child, especially about the chest, should be large and full in every part, and free from tight strings, so that the circulation of the blood may not be impeded, and that there may be plenty of room for the full development of the rapidly-growing body.

The frock ought to be of woolen material—warm, light and porous, in order that the perspiration may rapidly evaporate. The practice of some mothers in allowing their children to wear tight bands around their waists, and tight clothes, is truly reprehensible. Tight bands or tight belts around the waist of a child, are very injurious to health; they compress the chest, and thus interfere with the rising and falling of the ribs—so essential to the breathing.

The chest, bowels and feet should be kept comfortably warm. We must guard against an opposite extreme, and not keep them too hot.

It is a poor practice to cover over a child's head either with beaver, felt, or any thick impervious material. It is a well ascertained fact that both beaver and silk hats cause men to suffer from headache, and to lose their hair—the reason being that the perspiration cannot possibly escape through them.

It is a poor plan to lightly clad a child in order that he may be hardened. Instead of hardening, it would be likely to produce a contrary effect. It is an ascertained fact that more children of the poor, who are thus lightly clad, die, than of those who are properly defended from the cold. Again, what holds good with a young plant is equally applicable to a young child; and we all know that it is ridiculous to think of unneces-

early exposing a tender plant to harden it. If it were thus exposed, it would wither and die.

BAD EFFECT OF GARTERS

During the winter he ought to wear woolen stockings that will reach above the knees, and thick drawers that will reach to the shoe tops, as it is of the utmost importance to keep the lower extremities comfortably warm. Garters ought not to be worn, as they impede the circulation, waste the muscles, and interfere with walking. Stocking supporters are far better.

Shoes ought to be made according to the shape of the feet—rights and lefts are therefore desirable. The toe part of the shoe must be made broad, so as to allow plenty of room for the toes to expand, and that one toe cannot overlap another. This prevents corns and bunions, which annoy one all their lives.

FOOD FOR CHILDREN

As soon as a child has cut the whole of his first set of teeth, he can have nothing better than scalding hot new milk poured on sliced bread, with a slice or two of bread and butter to eat with it. Butter, in moderation, is nourishing, fattening, wholesome, and tends to keep the bowels regular. These facts should be borne in mind, as some mothers foolishly keep their children from butter, declaring it to be too rich for their children's stomachs. New milk should be used in preference to cream or skim milk. Cream, as a rule, is too rich for the delicate stomach of a child, and skim milk is too poor when robbed of the butter which the cream contains. But give cream and water, where new milk (as is occasionally the case) does not agree; but never give skim milk. Skim milk, among other evils, produces costiveness. Cream, on the other hand, regulates and tends to open the bowels. When a child has costive bowels, there is nothing better for his breakfast than well-made and well-boiled oatmeal mush, which ought to be eaten with milk fresh from the cow. You will

find cow's milk is valuable, indeed, an indispensable article of diet for the young; it is most nourishing, wholesome and digestible.

Milk contains every ingredient to build up the body, which is more than can be said of any other known substance. A child may live entirely, and grow, and become both healthy and strong, on milk, and on milk alone, as it contains every constituent of the human body. A child cannot "live by bread alone," but he might on milk alone. Milk is animal and vegetable—it is meat and bread—it is food and drink—it is a fluid, but as soon as it reaches the stomach, it becomes a solid—solid food; it is the most important and valuable article of diet for a child in existence. Young children, as a rule, are allowed to eat too much meat. It is a mistaken notion of a mother that they require so much animal food. If more milk were given and less meat, they would be healthier, and would not be so predisposed to disease, especially to diseases of debility, and to skin disease.

EATING BETWEEN MEALS

If he wants anything to eat between breakfast or dinner let him have a piece of dry bread; and if he has eaten very heartily at dinner, and, like Oliver Twist, "asks for more," give him a piece of dry bread to satisfy his craving. He will never eat more of it than will do him good, and yet he will take sufficient to satisfy his hunger, which is very important. He should now have meat, either mutton or beef, for dinner, daily, which must be cut up very small, and should be mixed with mealy, mashed potato and gravy. Let him be closely watched, to ascertain that he well masticates his food, and that he does not eat too quickly, for young children are apt to bolt their food

With regard to vegetables—mashed potatoes ought to be his staple vegetable, but every now and then, cauliflower, asparagus, turnips and Lima beans should be given. With respect to puddings, vary them, thus: Rice, one day; suet, another; batter, a third; tapioca, a fourth; or even occasionally, he might have apple, gooseberry or rhubarb pudding—providing the crust is plain and light. It is an excellent plan, as I have before remarked, to let a child eat jam—such as strawberry, raspberry, or

gooseberry—and that without stint, either with rice or with batter puddings. Variety of diet is good for a child; it will give him muscle, bone and sinew, and what is very important, it will tend to regulate his bowels, and thus prevent the necessity of giving him aperients.

Some parents are in the habit of giving their children strong tea and coffee. This practice is most hurtful. It acts injuriously upon the delicate nervous system, and thus weakens their whole frame. If milk does not agree give a cup of cocoa or "cambric" tea and coffee.

RESPECT A CHILD'S ANTIPATHY FOR FOOD

A child's antipathy to certain articles of diet should be respected; it is a sin and a shame to force him to eat what he has a great dislike to; a child sometimes dislikes the fat of meat, underdone meat, the skin of boiled milk and off rice pudding. Why should he not have his likes and dislikes as well as "children of a larger growth"? Besides, there is an idiosyncrasy—a peculiarity of the constitution in some children—and Nature points out what is good and what is bad for them individually, and we are not to fly in the face of Nature. If a child is forced to eat what he dislikes, it will most likely disorder his stomach and bowels; food, if it is really to do him good, must be eaten by him with a relish, and not with disgust or aversion.

A child ought to commence to dine with his parents as soon as he is old enough to sit at the table, providing the father and mother dine in the middle of the day. It makes them little gentlemen and gentlewomen in a manner that nothing else will.

AVOID BOWED LEGS

A child ought not be encouraged to walk too early; let him learn to walk himself. It will be found that when he is strong enough, he will hold by a chair and stand alone. When he can do so, and attempts to walk, he should then be supported. He will have the inclination as soon as he is strong enough, to walk. When he has the inclination and strength it will be folly to restrain him; if he has neither the inclination

nor the strength, it will be absurd to urge him on. Rely, therefore, to a certain extent, upon the inclination of the child himself. Self-reliance cannot be too early taught him. In the generality of instances, however, a child is put on his feet too soon, and the bones at that tender age, being flexible, bend, causing bowed and bandy-legs; and the knees, being weak, approximate too closely together, and thus they become knock-kneed.

GARDEN CULTURE FOR CHILDREN

Let the amusements of a child be as much as possible out of doors; let him spend the greater part of every day in the open air; let him exert himself as much as he pleases, his feelings will tell him when to rest, and when to begin again; let him be what Nature intended him to be—a happy, laughing, joyous child. Do not let him be always poring over books. He ought to be encouraged to engage in those sports wherein the greatest number of muscles are brought into play. For instance, to play at ball, or hoop, or football; to play at horses, to run to certain distances and back, and if a girl, to amuse herself with skipping rope, such being excellent exercise.

Every child, where practicable, should have a small plot of ground to cultivate, in which he may dig and delve, and make dirt pies. Let a child be natural—let him, as far as possible, choose his own sports. Remember, what may be amusing to you may be distasteful to him.

When he is in the nursery or the playground let him shout and riot and romp about as much as he pleases. His lungs and his muscles want developing, and his nerves require strengthening; and how can such be accomplished unless you allow them to be developed and strengthened by natural means? The nursery is a child's own domain; it is his castle, and he should be Lord Paramount therein. If he chooses to blow a whistle, to spring a rattle, or to make any other hideous noise, which to him is sweet music, he should be allowed to do so. If any members of the family have weak nerves, let them keep at a respectful distance.

A boy not partial to mischief, innocent mischief, and play, is unnatural

he is a man before his time. The want of proper exercise ruins the complexion, and their faces become of the color of a tallow candle.

SUNDAY BEST DAY OF THE WEEK

Parents often make Sunday a day of gloom; to this I must object. Of all the days in the week, Sunday should be the most cheerful and pleasant. It is considered by the church a festival; and a glorious festival it ought to be made, and one on which our Heavenly Father wishes to see all His children happy and full of innocent joy. Let Sunday, then, be made a cheerful, joyous, innocently happy day, and not, as it frequently is, the most miserable and dismal in the week. It is my firm conviction that many men have been made irreligious by the ridiculously strict and dismal way they were compelled, as children, to spend their Sundays. You can no more make a child religious by gloomy asceticism, than you can make people good by an act of Congress.

There are now beautiful books for children—Bible stories that are instructive and interesting. Among these are "Easy Steps For Little Feet," which will prove a boon to mothers when the little folks are tired of play.

There is so much talk nowadays about useful knowledge, that the importance of play and playgrounds is likely to be forgotten. I cannot help thinking, however, that a better state of things is dawning. "It seems to be found out that in our zeal for useful knowledge, that knowledge is found to be not the least useful which treats boys as active, stirring, aspiring, and ready."

THE KINDERGARTEN

I heartily approve of Kindergarten. Let the tiny children be confined for only three or four hours a day, and let what little they learn be taught as an amusement rather than as a labor.

The brain must have but very little work until the child is seven years old; impress this advice upon your memory, and let no foolish ambition to make your child a clever child allow you, for one moment, to swerve from this advice. Build up a strong, healthy body, and in due time the

brain will bear a moderate amount of intellectual labor. As I have given the mother so much advice, permit me, for one moment, to address a word to the father of the child:

A child should be taught singing. I consider singing a part of his education. Singing expands the walls of the chest, strengthens and invigorates his lungs, gives sweetness to his voice, improves his pronunciation, and is a great pleasure and amusement to him. Besides, singing helps to develop the finer sensibilities, such as sympathy, love and all spiritual tendencies.

GOOD AND BAD HABITS

A young child ought to be put to bed in the evening, at six in the winter, and at seven o'clock in the summer. Regularity ought to be observed, as regularity is very conducive to health. It is a reprehensible practice to keep a child up until nine or ten o'clock at night. If this is done he will become old before his time, and the seeds of disease will be sown.

As soon as he can run, let him be encouraged, for half an hour before he goes to bed, to race either about the hall, or the landing, or a large room, which will be the best means of warming his feet, of preventing chilblains, and of making him sleep soundly.

If a child sleeps alone, place him fairly on his back in the middle of the bed. A sweet little prayer, a good night kiss and a smile will send him off into dreamland with love for God and all the world. Why shouldn't his sleep be sweet?

A bedroom ought to be darkened at night; a child sleeps sounder and sweeter in a dark than in a light room. There is nothing better for the purpose of darkening a bedroom than Venetian blinds. Remember, a well-ventilated, but a darkened, chamber at night. The cot or the crib ought not to face the window, as the light is best behind.

POSITION WHEN ASLEEP

The best position for a child when sleeping is on his side; he ought to be accustomed to change about on the right side one night, on the left

another, and occasionally he should lie on his back. By adopting this plan, you will not only improve his figure, but likewise his health. Lying, night after night, in one position, is apt to make him crooked.

If a cold stable makes a healthy horse, I am quite sure that a moderately cold and well-ventilated bedroom helps to make a healthy child.

A child's bed ought to be comfortably clothed with blankets—I say blankets, as they are much superior to cotton comfortables; the perspiration will more readily pass through a blanket than a coverlid.

A child should be washed and dressed as soon as he awakes in the morning, if he awakes in anything like reasonable time. If he dozes after he is once awake, such slumber does him more harm than good. He should be up every morning as soon as it is light. If he is taught to rise early, it will make him an early riser for life, and will tend greatly to prolong both his existence and his happiness.

SECOND DENTITION

A child commences to cut his second set of teeth generally when about seven years old. He begins to cut them at about that time, but it should be borne in mind that the second crop of teeth, in embryo, is actually bred and formed from the very commencement of his life, under the first tier of teeth, but which remain in abeyance for years, and do not come into play until the first teeth, having done their duty, loosen and fall out, and thus make room for the more numerous, larger, stronger and more permanent teeth, which have to last for the remainder of his existence. The first set is sometimes cut with a great deal of difficulty, and produces various diseases; the second come easily, and are unaccompanied with any disorder; yet for the sake of good, sound teeth, while they are being formed the child should be fed mostly on entire wheat bread, graham bread, oatmeal grits of any kind, and all other food that contains bone-making elements.

I would recommend you to pay particular attention to the teeth of your children; for, besides their being ornamental, their regularity and soundness are of great importance to health. If there is any irregularity

in the appearance of the second set, lose no time in consulting an experienced and reliable dentist.

In all the prescriptions given below for child diseases I have endeavored to make them as simple as possible, and have avoided recommending powerful drugs. Complicated prescriptions and powerful medicines ought to be seldom given, and when they are, should only be administered by a judicious doctor. A child requires much more care and gentleness in his treatment than an adult; indeed, I often think it would be better to leave a child to nature rather than to give him large doses of medicine.

WATER ON THE BRAIN—SYMPTOMS AND CURE

Water on the brain is a disease of childhood; after a child is seven years old it is comparatively rare. It more frequently attacks delicate children—children who have been dry-nursed (especially if they have been improperly fed), or have been nursed too long, or have had consumptive mothers, or have suffered severely from teething, or are naturally of a feeble constitution. Water on the brain sometimes follows an attack of inflammation of the lungs, more especially if depressing measures have been adopted. It occasionally follows in the train of contagious eruptive diseases, such as small-pox or scarlatina. We may divide the symptoms of water on the brain into two stages. The first—the premonitory stage—which lasts four or five days, in which medical aid can be of great avail; the second the stage of drowsiness and of coma—which usually ends in death.

If the child is feverish and irritable, if his stomach is disordered, if he has urgent vomitings, or a foul breath, if his appetite is capricious and bad, if his nights are disturbed (screaming out in his sleep), if his bowels are disordered, more especially if they are constipated, if he is more than usually excited, if his eyes gleam with unusual brilliancy, if his tongue runs faster than it is wont, if his cheek is flushed and his head hot, and if he is constantly putting his hand to his head there is cause for suspicion. If to these symptoms is added a more than usual carelessness in tumbling about, in hitching his foot in the carpet, or in dragging one foot after the

other; if he has complained of darting, shooting, lancinating pains in his head, it may then be known that the first stage of inflammation (the forerunner of water on the brain) either has or is about taking place. No time ought to be lost in obtaining medical aid; for the commencement of the disease is the golden opportunity, when life may be saved.

In the early stages of the disease give the child three times a day a little Phosphate of Lime (about what can be put on a nickel piece). Phosphate of Lime can be obtained at any drug store. Get it in the homeopathic form if possible. Let the child also drink all he wishes of slightly sweetened weak Camomile tea.

CROUP

It is unusual for a child until he is twelve months old to have the croup; but from that time until the age of two years, he is more liable to it than at any other period. The liability after two years gradually lessens until he is ten years old, after which time it is rare.

There is no disease that requires more prompt treatment than croup, and none that creeps on more insidiously. The child at first seems to be laboring under a slight cold, and is troubled with a little dry cough; he is hot and fretful, and hoarse when he cries. Hoarseness is one of the earliest symptoms of croup, and it should be borne in mind that a young child, unless he is going to have the croup, is seldom hoarse. If your child is hoarse, he should be carefully watched, in order that not a moment be lost in applying the proper remedies as soon as croup is detected.

His voice at length becomes gruff, he breathes as though it were through muslin, and the cough becomes crowing. These three symptoms prove that the disease is now fully formed. These latter symptoms sometimes come on without any previous warning, the little fellow going to bed apparently well, until the mother is awakened, perplexed and frightened, in the middle of the night, by finding him laboring under the characteristic cough and the other symptoms of croup. If she delays to send for assistance, or if proper medicines are not instantly given, in a few

hours it will probably be of no avail, and in a day or two the little sufferer will be a corpse.

INFALLIBLE CURE FOR CROUP

If he has once had an attack of croup, I should advise you always to have in the house a four-ounce bottle of Wine of Ipecac, to fly to at a moment's notice.

I never, in my life, lost a child with croup—where I was called in at the commencement of the disease. Let me begin by saying, look well to the goodness and purity of the medicine, for the life of your child may depend upon the medicine being genuine. What medicine? Wine of Ipecac. At the earliest dawn of the disease give a teaspoonful of Wine of Ipecac every five minutes, until free vomiting is excited. In croup, then, before he is safe, free vomiting must be established, and that without loss of time. If, after the expiration of an hour, the Wine of Ipecac (having given during that hour one or two teaspoonfuls of it every five minutes) is not sufficiently powerful for the purpose, let the following mixture be substituted:

> Take of—Powdered Ipecac, one scruple;
> Wine of Ipecac, one ounce and a half.
> Make a mixture. One or two teaspoonfuls to be given every five minutes, first well shaking the bottle, until free vomiting is excited.

After the vomiting, place the child for a quarter of an hour in a warm bath. When out of the bath give him small doses of Wine of Ipecac every two or three hours. If the above remedies have no effect, don't fail to try a teaspoonful of kerosene. I have known it to cure when all else failed.

Another very convenient and unfailing remedy for croup is found in the following prescription: One teaspoonful of powdered alum; mix it either with a teaspoonful of honey or a tablespoonful of molasses. If vomiting does not follow in fifteen minutes repeat the dose. In case of membranous croup, the membrane can be seen floating in any containing vessel on top of water. The remedy is an invaluable one, and devoid of any danger to the child if often repeated. One or two doses, however, is usually all that is needed to break up any case of croup.

Wine of Ipecac, unfortunately, is not a medicine that keeps well; therefore, every three or four months a fresh bottle ought to be procured, either from a doctor or a druggist. As long as the Wine of Ipecac remains clear, it is good; but as soon as it becomes turbid, it is bad, and ought to be replaced by a fresh supply.

CHILD-CROWING

Child-crowing, or spurious croup, as it is sometimes called, is occasionally mistaken for genuine croup. It is a more frequent disorder than the latter, and requires a different plan of treatment. Child-crowing is a disease that invariably occurs only during dentition, and is most perilous; indeed, painful dentition is the cause—the only cause—of child-crowing. But, if a child laboring under it can fortunately escape suffocation until he has cut the whole of his first set of teeth, he is then safe.

Child-crowing comes on in paroxysms. The breathing during the intervals is quite natural—indeed, the child appears perfectly well; hence, the dangerous nature of the disease is either over-looked, or is lightly thought of, until perhaps a paroxysm worse than common takes place, and the little patient dies of suffocation

In a paroxysm of child-crowing the symptoms are as follows: The child suddenly loses and fights for his breath, and in doing so, makes a noise very much like that of crowing; hence the name of child-crowing. The face during the paroxysm becomes bluish or livid. In a favorable case, after a frightful struggle to breathe, he regains his breath, and is perfectly well until another paroxysm occurs. In an unfavorable case, the upper part of the windpipe—the glottis—remains for a minute or two closed, and the child, not being able to breathe, drops, a corpse, in his nurse's arms. Many children, who are said to have died of fits, have really died of child-crowing.

Treatment, same as "Water on the Brain."

In every severe paroxysm of child-crowing, put your forefinger down the throat of the child, and pull his tongue forward. This plan of pulling the tongue forward opens the epiglottis (the lid of the glottis), admits

air into the lungs, and thus staves off impending suffocation. If this plan were generally known and adopted, many precious lives might be saved.

INFLAMMATION OF THE LUNGS—HOW TREATED

If the child has had a shivering fit; if his skin is very hot and dry, if his lips are parched, if there is great thirst, if his cheeks are flushed, and he is dull and heavy, wishing to be quiet in his crib; his appetite diminished, his tongue furred, his mouth burning hot and dry, his urine scanty and high-colored, staining the napkin or the linen; his breathing short, panting, hurried and oppressed, with a hard dry cough, and if his skin is burning hot;—then there is no doubt that inflammation of the lungs has taken place.

If inflammation of the lungs were properly treated at the onset, a child would scarcely ever be lost by that disease. I say this advisedly, for in my own practice, providing I am called in early, and my plans are strictly carried out, I scarcely ever lose a child from inflammation of the lungs. You may ask,—What are your plans? I will tell you in case you cannot promptly obtain medical advice, as delay might be death.

Keep the child to one room, to his bedroom, and to his bed. Let the chamber be properly ventilated. If the weather is cool, build a small fire in the grate; otherwise he is better without a fire. Let him live on low diet, such as weak black tea, milk and water (in equal quantities), and toast and water, thin oatmeal gruel, arrowroot, and such like simple beverages, and give him the following mixture:

Tinct. of Ignatia.....2 drops.
Tinct. of Aconite.....2 drops.
One full glass of water. Dose, teaspoonful every 10 or 15 minutes. Put a hot water bottle to the feet.

BRONCHITIS—HOW CURED

Bronchitis is a much more frequent disease than inflammation of the lungs; indeed, it is one of the most common complaints both of infants and of children, while inflammation of the lungs is comparatively a rare disease.

The child for the first few days labors under symptoms of a heavy cold; he has not his usual spirits. In two or three days, instead of the cold leaving him, it becomes more confirmed; he is now really sick, fretful, and feverish; his breathing becomes rather hurried and oppressed; his cough is hard, dry and loud; he wheezes, and if you put your ear to his naked back, between his shoulder blades, you will hear the wheezing more distinctly. If at the breast, he does not nurse with his usual avidity; the cough, notwithstanding the breast is a great comfort to him, compels him frequently to loose the nipple; his urine is scanty and rather high colored, staining the napkin, and smelling strongly. He is generally worse at night.

Confine the child to his bedroom, and if very ill, to his bed. If it is winter, have a little fire in the grate, but be sure that the temperature of the chamber is comfortable, and let the room be properly ventilated, which may be effected by occasionally leaving the door a little ajar.

If he will not lie on the bed, let him rest on a pillow placed on the lap; the pillow will cause him to lie cooler, and will more comfortably rest his wearied body. If he is at the breast, keep him to it, and give no artificial food, unless a little toast and water if he is thirsty. If he is weaned, let him have either milk and water, toast and water, barley water, or weak black tea, with plenty of new milk in it, etc., but, until the inflammation has subsided, neither broth nor beef tea.

In mild cases but little medicine is needed. When the fever comes on in the after part of the day, it is well to give the following:

Tinct. of Aconite.....2 drops.
One full glass of water. Dose, teaspoonful every 15 minutes.

For external application, take a strip of old muslin, wet in kerosene, and wrap around the neck; cover with dry cloth. Leave on until the skin is red.

When the bronchitis has disappeared, the diet ought gradually to be improved—rice, sago, tapioca, light batter-pudding, etc., and, in a few days, either a little chicken or a mutton chop, mixed with a well-mashed potato and crumb of bread should be given. But let the improvement in his diet be gradual, or the inflammation may return.

DIPHTHERIA

This terrible disease, although by many considered a new complaint, is of very ancient origin.

The little patient, before the disease really shows itself, feels poorly, and is out of sorts. A shivering fit, though not severe, may generally be noticed. There is heaviness, and slight headache, principally over the eyes. Sometimes, but not always, there is a mild attack of delirium at night. The next day he complains of slight difficulty of swallowing. If old enough, he will complain of constriction about the throat. On examining the throat the tonsils will be found to be swollen and more red than usual. Slight specks will be noticed on the tonsils. In a day or two an exudation will cover them, the back of the palate, the tongue, and sometimes the inside of the cheeks and the nostrils. This exudation of lymph gradually increases until it becomes a regular membrane, which puts on the appearance of leather, hence its name diphtheria. This membrane peels off in pieces, and if the child is old and strong enough he will sometimes spit it up in quantities, the membrane again and again rapidly forming as before. The discharges from the throat are occasionally, but not always, offensive. The glands about the neck and under the jaw are generally much swollen, and the skin is rather cold and clammy; the urine is scanty and usually pale; the bowels at first are frequently relaxed. The diarrhœa may or may not cease as the disease advances.

ANTITOXIN

Since the discovery of the Antitoxin treatment in cases of diphtheria this dread disease has been robbed of its terrors. The Antitoxin is derived from the blood of horses that have been subjected to repeated inoculations of increasing doses of the toxins produced by the diphtheria bacillus.

Antitoxin is injected by means of a hypodermic syringe. One holding about 5 cubic centimeters is most convenient. The injection may be made upon any part of the body—preferably the abdomen, the thighs or the back.

There is no danger whatever except in delay. Call a physician promptly upon first appearance of symptoms. No harm is done if the case is not diph-

theria, and if it is, everything is gained. First day treatment is the safest—the third day has proved too late as at that time the Antitoxin has proved ineffective.

The Dose.—In a case of moderate severity should be not less than 3,000 units, and in severe cases 5,000 to 10,000 units should be given at once. Larger doses may be given in tonsillar diphtheria, as well as in nasal or laryngeal diphtheria. The Antitoxin may be obtained in drug stores and may be administered by any one authorized to use the hypodermic needle. But the hands and the needle must be properly sterilized and the skin at place of injection must be thoroughly cleansed.

Keep the child to his bedroom and to his bed. For the first two or three days, while the fever runs high, put him on a low diet, such as milk, arrow-root, etc. Apply to his throat, every four hours, a warm bran and oatmeal poultice. Keep the feet warm.

Examine well into the ventilation, for diphtheria is frequently caused by deficient ventilation.

MEASLES AND HOW TO TREAT THEM

Measles commences with symptoms of a common cold; the patient is at first chilly, then hot and feverish; he has a running at the nose, sneezing, watering, and redness of the eyes, headache, drowsiness, a hoarse and peculiar ringing cough, which nurses call "measle-cough," and difficulty of breathing. These symptoms usually last three days; on the fourth the eruption generally makes its appearance, and continues for four days and then disappears, lasting altogether from the commencement of the symptoms of cold to the decline of the eruption, seven days. It is important to bear in mind that the eruption consists of crescent-shaped patches; that they usually appear first about the face and neck, in which places they are the best marked; then on the body and on the arms; and, lastly on the legs, and that they are slightly raised above the surface of the skin. The face is swollen, more especially the eyelids, which are

sometimes closed for a few days. Running at the nose, sneezing, a peculiar hoarse cough, and half-moon-shaped patches, are the leading features of the disease, and point out for a certainty that it is measles.

The principal danger in measles arises from the affection of the chest. The mucus or lining membrane of the bronchial tubes is always more or less inflamed, and the lungs are sometimes affected.

The only way to throw out the eruption, is to keep the body comfortably warm, and to give the following treatment:

The child ought, first of all, to be placed ten minutes in a hot bath in which has been placed a tablespoonful of baking soda. Rub well but quickly and then put to bed in a room kept comfortably warm. If it is winter time, there should be a small fire in the room; in the summer time the fire would be improper. Take the following medicine: Tinct. of belladonna, 2 drops; one full glass of water. Dose: Teaspoonful every 30 minutes until the eruptions come to the surface. The child must not be exposed to draughts; though from time to time, the door ought to be left a little ajar in order to change the air of the apartment. Keep the child, for the first few days, on a low diet, such as milk and water, arrowroot, bread and butter, etc.

SCARLET FEVER

The patient is generally chilly, languid, drowsy, feverish and poorly for two days before the eruption appears. At the end of the second, the characteristic bright scarlet efflorescence, somewhat similar to the color of a boiled lobster, usually first shows itself. The scarlet appearance is not confined to the skin, but the tongue, throat and whites of the eyes put on the same appearance, with only this difference, that on the tongue and on the throat the scarlet is much darker. The eruption usually declines on the fifth, and is generally indistinct on the sixth day; on the seventh it has completely faded away. After the first few days there is usually great itching on the surface of the body. At the end of the week the skin begins to peel and to dust off, making it look as though meal had been sprinkled upon it.

There are three forms of scarlet fever—the one where the throat is

little, if at all, affected, and this is a mild form of the disease; the second, which at night is generally attended with delirium, where the throat is much affected, being often greatly inflamed and ulcerated, and the third (which is, except in certain unhealthy districts, comparatively rare, and which is very dangerous), the malignant form.

Serious stages of scarlet fever can be averted by keeping the eruptions on the surface. This can be done by free doses of the following: Tinct. of aconite, 2 drops; one full glass of water. Dose: 2 teaspoonfuls every hour. Wash the entire body—portions at a time so as not to expose it—with hot water and boracic acid, in the proportion of a teaspoonful in a quart of water or alcohol and water.

The principal danger in scarlet fever arises from the affection of the throat, the administration of aperients during the first ten days, and a peculiar disease of the kidneys ending in dropsy; on which account, the doctor ought, when practicable, to be sent for at the onset, that no time may be lost in applying proper remedies.

HOW TO DISTINGUISH SCARLET FEVER FROM OTHER DISEASES

There is an excellent method of determining, for a certainty, whether the eruption is that of scarlatina or otherwise. I have in several instances ascertained the truth of it: "For several years M. Bouchut has remarked in the eruptions of scarlatina a curious phenomenon, which serves to distinguish this eruption from that of measles. The phenomenon in question is a white line, which can be produced at pleasure by drawing the back of the nail along the skin where the eruption is situated. On drawing the nail, or the extremity of a hard body (such as a penholder), along the eruption, the skin is observed to grow pale, and to present a white trace, which remains for one or two minutes, or longer, and then disappears. In this way the diagnosis of the disease may be very distinctly written on the skin; the word 'scarlatina' disappears as the eruption regains its uniform tint."

TREATMENT OF THROAT

The first thing to be done is to send the child to bed. Fresh air, and plenty of it, in scarlet fever is the best doctor a child can have.

Now for the throat. The best external application is a bran and oatmeal poultice. Put half a teacupful of bran into a saucepan, put it on the fire to boil; as soon as it boils, take it off the fire, and stir oatmeal into it, until it is of the consistence of a nice soft poultice; then place it on a rag, and apply it to the throat; carefully fasten it on with a bandage, two or three turns of the bandage going around the throat, and two or three over the crown of the head, so as nicely to apply the poultice where it is wanted—that is, to cover the tonsils. Tack the bandage; do not pin it. Change the poultice three times a day. Take the following:

Tinct. of belladonna, 2 drops; one full glass of water. Dose: Teaspoonful every hour. Alternate with this tinct. aconite, 2 drops; one full glass of water. Dose: Teaspoonful every hour. For gargle, use listerine in water.

If the child is at the breast, keep him entirely to it. If he is weaned, and under two years of age, give him milk and water, and cold water to drink. If he is older give him toast and water, and plain water from the pump, as much as he chooses; let it be quite cold—the colder the better. Weak black tea, or thin gruel, may be given, but not caring, unless an infant at the breast, if he takes nothing but cold water. If the child is two years old and upward, roasted apples with sugar and grapes, will be very refreshing, and will tend to cleanse both the mouth and the throat. Avoid broths and stimulants.

When the appetite returns you may consider the patient safe. The diet ought now to be gradually improved. Bread and butter, milk and water, and arrowroot should be given for the first two or three days. Then a light batter or rice pudding may be added, and in a few days, either a little chicken or mutton broth.

CARE TO BE USED ON RECOVERY OF SCARLET FEVER

Now comes very important advice. After the first few days, probably five or six, sometimes as early as the fourth day—watch carefully and warily, and note the time, the skin will suddenly become cool, the child will say that he feels chilly; then is the time you must change your tactics—

instantly close the windows and put extra clothing, a blanket or two, on his bed. A flannel nightgown should, until the dead skin has pulled off, be worn next the skin, when the flannel nightgown should be discontinued. The patient ought after to wear, in the daytime, a flannel under vest. His drinks must now be given with the chill off; he ought to have a warm cup of tea, and gradually his diet should be improved.

The body, including the scalp, of a scarlet fever patient, should be thoroughly sponged once each day with warm water to which has been added some alcohol, after the fourth day. This application will not only be very agreeable to the patient's feelings, as there is usually great irritation and itching of the skin, but it will be an important means of preventing the dead skin, which is highly infectious, and which comes off partly in flakes and partly floats about the air in dust, from infecting other persons.

Scarlet fever dropsy, which is really a formidable disease, generally arises from the carelessness, the ignorance, and the thoughtlessness of parents in allowing a child to leave the house before the new skin is properly formed and hardened. Prevention is better than cure.

HOW TO PREVENT CONTAGION

Thus far with regard to the danger to the child himself. Now let me show you the risk of contagion that you inflict upon families, in allowing your child to mix with others before a month at least has elapsed. Bear in mind, a case is quite as contagious while the skin is peeling off as it was before. Thus, in ten days or two weeks, there is as much risk of contagion as at the beginning of the disease, and when the fever is at its height. At the conclusion of the month, the old skin has generally all peeled off, and the new skin has taken its place; consequently there will be less fear of contagion to others. But the contagion of scarlet fever is so subtle and so uncertain in its duration, that it is impossible to fix the exact time when it ceases.

To purify a house, clothes, and furniture, from the contagion of scarlet fever, let every room in the house, together with its contents, and clothing

and dresses that cannot be washed, be well fumigated with sulphur—taking care to close both windows and doors while disinfecting the house; let every room be lime-washed and then white-washed; if the contagion has been virulent, let every bedroom be freshly papered (the walls having been previously stripped of the old paper and then lime-washed); let the bed, the bolsters, the pillows, and the mattresses be cleaned and purified; let the blankets and coverlids be thoroughly washed, and then let them be exposed to the open air—if taken into a field so much the better; let the rooms be well scoured; let the windows, top and bottom, be thrown open; let the drains be cleansed with lime.

CHICKEN-POX

Chicken-pox is occasionally, but not always, ushered in with a slight shivering fit; the eruption shows itself in about twenty-four hours from the child first appearing poorly. The eruption comes out in the form of small pimples, and principally attacks the scalp, the neck, the back, the chest and the shoulders, but rarely the face, while in small-pox the face is generally the part most affected. The next day these pimples fill with water, and thus become vesicles; on the third day they are at maturity. The vesicles are quite separate and distinct from each other. There is a slight redness around each of them. Fresh ones make their appearance while the others are dying away. Chicken-pox is usually attended with a slight itching of the skin; when the vesicles are scratched the fluid escapes, and leaves hard, pearl-like substances, which, in a few days, disappear. Chicken-pox never leaves pit marks behind. It is a child's complaint; adults scarcely ever have it.

It is not at all dangerous, but, on the contrary, a trivial complaint. It lasts only a few days, and requires but little medicine. The patient ought to keep the house for three or four days, and should abstain from animal food. Give tinct. of aconite, 2 drops; one glass of water. Dose: 2 teaspoonfuls every hour.

WHOOPING COUGH

Whooping-cough is emphatically a disease of the young; it is rare for adults to have it; if they do, they usually suffer more severely than children. A child seldom has it but once in his life. It is highly contagious, and therefore frequently runs through a whole family of children, giving much annoyance, anxiety and trouble to the mother and the nurses; hence whooping-cough is much dreaded by them. It is amenable to treatment. Spring and summer are the best seasons of the year for the disease to occur. This complaint usually lasts from six to twelve weeks—sometimes for a much longer period, more especially if proper means are not employed to relieve it.

Whooping-cough commences as a common cold and cough. The cough, for ten days or a fortnight, increases in intensity; at about which time it puts on the characteristic "whoop." The attack of cough comes on in paroxysms. In a paroxysm, the child coughs so long and so violently, and expires so much air from the lungs without inspiring any, that at times he appears nearly suffocated and exhausted; the veins of his neck swell; his eyes, with the tremendous exertions, almost seem to start from their sockets; at length there is a sudden inspiration of air through the contracted chink of the upper part of the windpipe—the glottis—causing the peculiar "whoop;" and after a little more coughing he brings up some glairy mucus from the chest; and sometimes food from the stomach by vomiting. This relieves him until the next paroxysm occurs, when the same process is repeated, the child during the intervals appearing quite well, and after the cough is over instantly returning either to his play or to his food.

TREATMENT OF WHOOPING COUGH

A new-born babe—an infant of one or two months old—commonly escapes the infection; but if he catches whooping-cough at that tender age unfortunately it is likely to fare harder with him than if he were older—the younger the child the greater the risk. Still, in such a case, do

not despair; I have known numerous instances of new-born infants, with judicious care, recovering perfectly from the attack, and thriving after it as though nothing of the kind had ever happened.

For the first ten days give the following prescription: Tinct. of belladonna, 2 drops; one full glass of water. Dose: 2 teaspoonfuls every hour.

If the child is not weaned, keep him entirely to the breast; if he is weaned, to a milk and farinaceous diet. Confine him for the first ten days to the house, more especially if the whooping-cough is attended, as it usually is, with more or less bronchitis. But take care that the rooms are well ventilated, for good air is essential to the cure.

When the spasms come on give each time a dose of the following: Juice of 3 lemons; strained honey, 2 oz.; Jamaica rum, 2 oz. Mix thoroughly. Dose: 1 teaspoonful.

Let him wear a broad band of new flannel, which should extend around from his chest to his back, and which ought to be changed every night and morning, in order that it may be dried before putting on again. To keep it in its place it should be fastened by means of tapes and shoulder straps.

The diet ought now to be improved—he should gradually return to his usual food; and, weather permitting, should almost live in the open air—fresh air being one of the finest medicines.

BEST POSITION TO ASSUME WHEN WHOOPING

During a paroxysm of whooping-cough, if the child is old enough, let him stand up; but if he is either too young or too feeble, raise his head, and bend his body a little forward; then support his back with one hand, and the forehead with the other. Let the mucus be wiped out of his mouth with a soft handkerchief the moment it is within reach.

A chill is to be looked upon as an important symptom. Nearly all serious illness commences with a chill; severe colds, influenza, inflammations of different organs, scarlet fever, measles, small-pox and very many other diseases, begin in this way. If your child should ever have a chill, instantly send for a doctor, as delay might be dangerous. A few hours of

judicious treatment, at the commencement of an illness, is frequently of more avail than days and weeks, nay, months of treatment, when disease has gained a firm footing. A serious disease often steals on insidiously, and we have perhaps only a slight chill to tell us of its approach.

In case of a chill, instantly have the bed warmed, and put the child to bed. Apply at once a hot water bottle or a hot brick, wrapped in flannel, to the soles of his feet. Put an extra blanket on his bed, and give him a cup of hot tea. As soon as the shivering is over, and he has become hot, gradually lessen the extra quantity of clothes on his bed, and take away the hot bottle or hot brick from his feet.

MUMPS

An inflammation of the parotid gland is most commonly ushered in with a light feverish attack. After a short time, a swelling, of stony hardness, is noticed before and under the ear, which swelling extends along the neck toward the chin. This lump is exceedingly painful, and continues painful and swollen for four or five days, at the end of which time it gradually disappears, leaving not a trace behind. The swelling of mumps never gathers. It may affect one or both sides of the face. It seldom occurs but once in a lifetime. It is contagious, and has been known to run through a whole family or school; but it is not dangerous unless it leaves the parotid gland, which is rarely the case, and migrates to the head, breast or testicles.

Foment the swelling, four or five times a day, with a flannel wrung out of hot camomile and hops in equal parts, and apply every night a bran and oatmeal poultice to the swollen gland or glands, and keep on a flannel during the day. Debar the little patient from taking meat and broth for a few days, and let him live on bread and milk, light puddings, and arrowroot. Keep him in a warm and well ventilated room, and shut him out from the company of his brothers, his sisters and young companions. Give him a little mild aperient medicine. Of course, if there is the slightest symptom of migration to any other part or parts, instantly call in a doctor.

BOIL—TREATMENT OF

One of the best applications is a Burgundy-pitch plaster spread on a soft piece of wash-leather. Let a druggist spread a plaster, about the size of the hand; and from this piece cut small plasters, the size of a twenty-five cent piece or larger (according to the dimensions of the boil), which snip around and apply to the part. Put a fresh one on daily. This plaster will soon cause the boil to break; when it does break squeeze out the contents and apply one of the plasters as before, which renew every day, until the boil is well.

The old-fashioned remedy for a boil—common yellow soap and brown sugar—is a capital one for the purpose. It is made with equal parts of brown sugar and shredded yellow soap, mixed by means of a table knife on a plate, with a few drops of water, until it is all well blended together, and of the consistence of thick paste; it should then be spread on a piece of wash-leather, or on thick linen, and applied to the boil, and kept in its place by means of a bandage or a folded handkerchief, and should be renewed once or twice a day. This is an excellent application for a boil—soothing, comforting, and drawing—and will soon effect a cure. A paste of honey and flour, spread on linen, is another popular and good application for a boil.

If the boil should arise from a delicate state of health, give the child Scott's cod-liver oil, and an abundance of milk and farinaceous food. Let him have plenty of fresh air, exercise, and play.

GATHERED EAR

A young child screaming shrilly, violently, and continuously, is oftentimes owing to earache; carefully examine each ear, and ascertain if there is any discharge; if there is, the mystery is explained.

Apply to the ear a hot water bottle—as hot as can be comfortably borne, or foment the ear with a flannel wrung out with a decoction of hot camomile and hops. A roasted onion, inclosed in muslin applied to the ear, is an old fashioned and favorite remedy. Put into the ear, but not very far,

a small piece of absorbent cotton, moistened with warm olive oil. Take care that the cotton is always removed before a fresh piece is substituted, as, if allowed to remain in any length of time, it may produce a discharge from the ear. Avoid all cold applications. If the earache is severe, keep the little fellow at home, in a room of equal temperature, but well ventilated, and give him no meat for a day or two.

If a discharge from the ear should either accompany or follow the earache, more especially if the discharge is offensive, use the following remedy, and if that fails call in a physician.

Tinct. of nux vomica, 2 drops; Fowler's solution of arsenic, 5 drops one full glass of water. Dose: 2 teaspoonfuls every hour.

A "Sty" on the Eyelid.—Bathe the eye frequently with warm milk and water, and apply every night at bedtime a cracker soaked in hot milk. No medicine is required, but if the child is gross, keep him for a few days from meat, and let him live on bread and milk and farinaceous puddings.

LARGE BOWELS—HOW CURED

It ought to be borne in mind that the bowels of a child are larger in proportion than those of an adult. But, if they are actually larger than they ought to be, rub them well for a quarter of an hour at a time night and morning, with olive oil, and then apply a broad flannel bandage. A broad flannel belt worn night and day, firm but not tight, is very serviceable. The child ought to be prevented from drinking as much as he has been in the habit of doing; let him be encouraged to exercise much in the open air, and let strict regard be paid to his diet.

PROTRUSION OF THE LOWER BOWEL

Is due to the common and reprehensible practice of a mother administering frequent aperients to her child. Another cause, is allowing him to remain for a quarter of an hour or more at a time on his chair; this induces him to strain, and to force the bowel down.

The best manner of returning the bowel is to lay the child upon the

bed on his face and bowels, with his hips a little raised, then smear lard on the forefinger of your right hand (taking care that the nail is cut close), and gently press the bowel into its proper place with the forefinger. Remember, if the above methods are observed, you cannot do the slightest injury to the bowel; and the sooner it is returned the better it will be for the child, for if the bowel is allowed to remain long down, it may slough or mortify, and death may ensue. After each motion the nurse must see that the bowel does not come down, and if it does, she ought instantly to return it. The nurse should also be careful not to allow the child to remain on his chair more than two or three minutes at a time.

Another excellent remedy for the protrusion of the bowel, is to use every morning a cold salt and water sitz bath. There need not be more than a depth of three inches of water in the bath; a small handful of table salt should be dissolved in the water. A dash of warm water in the winter time must be added, to take off the extreme chill, and the child ought not to be allowed to sit in the bath for more than one minute, or while the mother can count a hundred, taking care to throw either a square of flannel or a small shawl over his shoulders. The sitz bath ought to be continued for months, or until the complaint is removed. I cannot speak in too high praise of these baths.

SCROFULA—ITS TREATMENT

The child who has a moist, cold, fair, delicate and almost transparent skin, large prominent blue eyes, protuberant forehead, light brown or auburn hair, rosy cheeks, pouting lips, milk white teeth, long neck, high shoulders, small, flat and contracted chest, tumid bowels, large joints, thin limbs and flabby muscles, is the one most predisposed to scrofula. The disease is not entirely confined to the above, sometimes one who has black hair, dark eyes and complexion, is subject to it, but yet far less frequently than the former. It is a remarkable fact that the most talented are the most prone to scrofula, and being thus clever their intellects are too often cultivated at the expense of their health. In infancy and childhood, either water on the brain or mesenteric disease; in youth, pulmonary consump-

tion is frequently their doom; they are like shining meteors, their life is short, but brilliant.

Treatment.—Expose the patient to the direct rays of the sun—remember the sun kills germs. Cover the body with some light-colored material—white, pink or blue—not black—black colors are a destroyer of life.

Strict attention to the rules of health is the means to prevent scrofula. Books, unless as an amusement, ought to be discarded. Take of the following: Iodide of iron, 2 grains. Place in a quart bottle and fill with water. Take a teaspoonful three times a day. Continue for one month or six weeks. Early rising is most beneficial. Beefsteaks and mutton chops in abundance, and plenty of milk and farinaceous food—such as rice, sago, arrowroot, etc., should be the diet

HOW TO WARD OFF SCROFULA

Scrofula, if the above rules are strictly and perseveringly followed, may be warded off, but there must be no half measures, no trying to serve two masters—to cultivate at the same time the health and the intellect. The brain must not be taxed until the body becomes strong. "You may prevent scrofula by care, but that some children are originally predisposed to the disease there cannot be the least doubt, and in such cases the education and habits of the youth should be so directed as to ward off a complaint, the effects of which are so frequently fatal."

Suppose the disease to be already formed, the plan recommended above must still be pursued, not by fits and starts, but steadily and continuously, for it is a complaint that requires a vast amount of patience and great perseverance. Sea bathing in such cases is generally most beneficial.

WETTING THE BED

If a child wets his bed while asleep, let him be encouraged to urinate just before he goes to bed, and again when the family retire to rest. If he is asleep at the time, he will become so accustomed to it that he will urinate without awaking. He ought to be made to lie on his side; for if put on his back the urine will rest upon an irritable part of the bladder, and if

inclined to wet his bed he will not be able to avoid doing so. He must not be allowed to drink much with his meals, especially with his supper. Wetting the bed is an infirmity with some children, which they gradually outgrow. It is, therefore, cruel to scold and chastise them for it. Waterproof bed sheeting—one yard by three-quarters of a yard—will effectually preserve the bed, and ought always on these occasions to be used.

CHILBLAINS AND THE WAY TO CURE THEM

Let a child who is subject to them wear in the winter time a square piece of wash leather over the toes, a pair of warm lamb's wool stockings, and good shoes; but above all, let him be encouraged to run about the house as much as possible, especially before going to bed; and on no account allow him to warm his feet before the fire, or to bathe them in hot water. If the feet are cold, and the child too young to take exercise, then let them be well rubbed with the warm hand. If adults suffer from chilblains, I have found friction, night and morning, with horse hair flesh gloves, the best means of curing them.

Secondly, the Way to Cure Them.—If they are unbroken, the old-fashioned remedy of onion and salt is one of the best of remedies. Cut an onion in two, take one-half of it, dip it in table salt and rub the chilblain with it for two or three minutes. The onion and salt is a famous remedy to relieve that intolerable itching which sometimes accompanies chilblains; then let them be covered with a piece of lint, over which a piece of wash leather should be placed.

If they are broken, let a piece of lint be spread with spermaceti cerate, and applied every morning to the part, and use a white bread poultice every night.

WORMS—THEIR TREATMENT AND EXTERMINATION.

The different varieties of worms that infest a child's bowels are the tape-worm, the long round-worm, and the most frequent of all, the common thread or maw-worm. The tape-worm infests the whole course of the bowels, both small and large; the long round-worm, principally the small bowels, occasionally the stomach; it sometimes crawls out of the child's

mouth, causing alarm to the mother; there is no danger in its doing so; the common thread-worm or maw-worm infests the rectum or fundament.

The causes of worms are: Weak bowels, bad and improper food, such as unripe, unsound, or uncooked fruit, and much green vegetables; pork, especially underdone pork; and abundance of sweets; the want of salt in the food.

SYMPTOMS OF WORMS.

The symptoms of worms are—emaciation; itching and picking of the nose; a dark mark under the eyes; grating of the teeth during sleep, starting in the sleep; foul breath; furred tongue; uncertain appetite—sometimes voracious, at other times bad, the little patient sitting down very hungry to his dinner, and before scarcely tasting a mouthful, the appetite vanishing; large bowels; colicky pains of the bowels, slimy motions; itching of the fundament.

Tape-worm and round-worm, more especially the former, are apt to produce convulsions in children. They are weakening to the constitution, and usually cause great emaciation and general ill health. Drink plenty of slippery elm tea. This is excellent and harmless. For the long worms give the old-fashioned worm seed tea found at all drug stores. For the rectum worms, wash the rectum with salt and water and drink weak salt and water.

Worms generally infest weak bowels, hence the moment a child becomes strong, worms cease to exist.

SCABBY ERUPTIONS AT MOUTH DUE TO WORMS

If a child has a scabby eruption about the mouth, in all probability it comes from worms. Apply vaseline—nothing else. Do not, on any account, use any local application to heal it; if you do, you may produce injury; you may either bring on an attack of inflammation, or you may throw him into convulsions. This breaking out is frequently a safety-valve, and must not be needlessly interfered with. Should the eruption be

severe, reduce the child's diet, keep him from butter, from gravy, and from fat meat, or from meat altogether for a few days, and give him mild aperient medicine.

MILK CRUST

Milk crust is a complaint of very young children—of those who are cutting their teeth. It is a nasty looking complaint, and frequently gives a mother a great deal of trouble. It is well to know its symptoms, its causes, and its probable duration.

When a child is about nine months or a year old, small pimples are apt to break out around the ears, on the forehead, and on the head. These pimples at length become vesicles (that is they contain water), which run into one large one, break, and form a nasty, dirty-looking, yellowish, and sometimes greenish, scab, which scab is moist, or sometimes quite wet, and gives out a disagreeable odor, and which is sometimes so large on the head as actually to form a skull cap, and so extensive on the face as to form a mask. These, I am happy to say, are rare cases. The child's beauty is for a time completely destroyed, and not only his beauty, but his good temper, for as the eruption causes great irritation and itching, he is constantly clawing himself, and crying with annoyance the great part of the day, and sometimes of the night—the eruption preventing him from sleeping. It is not contagious, and soon after he has cut the whole of his first set of teeth it will get well, providing it has not been improperly interfered with.

The cause of milk crust is from the nervous irritation of teething. It is a lack of the bone-making material in the child. Take of the following: Phosphate of lime (homœopathic preparation). Dose: As much as can be put on a five-cent piece, 3 times a day. External application: One ounce of vaseline mixed with two grains of golden seal powder. Apply every night.

CHAPTER XXI

CONSTIPATION

BY CONSTIPATION is meant a sluggish state of the bowels, by reason of which the fæces are retained in the body a longer time than is warranted in a state of health. The discharges are hard and dry, in small quantities, and evacuated with difficulty. This is one of the most common disorders to which mankind is subject, and the results are far more serious than are generally supposed.

RETAINED EXCREMENT—A SLOW POISON

The retained excrement is, to a certain extent, absorbed into the system and acts as so much poison, the eliminating of which the other organs are overtaxed, causing debility of the whole system.

It has been asserted that there is not a disease of the human system which cannot be traced to this one trouble.

The nutriment derived from the food is taken into the blood from the stomach and small intestines, while the residuum—comprising the larger part of all the food—passes into the large intestine, called the colon. Beginning on the right side of the body just above the pelvis, the colon passes upward to the lower border of the ribs, then crosses the body and descends on the left side, and inward to the spinal column, where it merges into the rectum.

The bowels possess what is termed peristaltic action, that is, each portion alternately relaxes and contracts, thus forcing the food through them. The passage of the food is more rapid through the small intestines than through the colon, which, by its large size and slow motion, allows the greater part of the waste material, or fæcal matter, to accumulate in it. While this remains in the colon it occasions no inconvenience, but as soon as it passes into the rectum it causes a desire to evacuate the bowels.

The time of passage from the colon to the rectum varies in different

individuals—some requiring two evacuations daily to a perfect state of health, others require but one. In determining whether the bowels are costive the state of the evacuations, as well as the frequency, should be taken into consideration. If they are scanty, dry, hard, and attended with pain, constipation is present, even though the evacuations are of daily occurrence. As a rule it may be stated that there should be a full, free, soluble and satisfactory evacuation of the bowels daily, and not for one day should this rule be broken, or constipation allowed.

CAUSES OF CONSTIPATION

Causes.—Sedentary habits, particularly where the mind is closely applied to any subject; the continued use of laxative medicines; the habitual neglect of the bowels, so common among women; the mechanical pressure which the womb in the case of a pregnant woman, in its enlarged condition, exerts upon the rectum; errors in diet, and especially errors in dress.

In nearly all forms of constipation there is a lack of contractile power in the colon and the rectum. This is due largely to want of proper exercise. Can it be wondered that in such cases constipation should be the result? Exercise in the open air, occupation and household duties are the best medicines known for constipation. Every step taken in walking, and every bending or twisting motion of the body by jarring and crowding the intestines, assists them in their work. Intense mental application should be avoided. Any continued strain upon the nervous organization takes away the nerve stimulant, essential to digestion and assimilation.

LAXATIVE MEDICINES—THEIR EFFECT ON THE SYSTEM

Laxative medicines should be avoided when possible. Sometimes it becomes necessary to give a laxative, but when this is the case the mildest should be chosen. Strong purgatives are highly improper, and often dangerous. Especially is this the case in pregnancy, when the patient is liable to miscarry.

Cathartic drugs depend for effect upon the quality they possess of

exciting secretion and peristaltic activity. They do this through the nervous system, few of them being mechanical in their action, hence accomplishing their results by stimulating the nervous system to extra effort. In doing this they necessarily exhaust the source of supply, for the tendency of all stimulation is to induce exhaustion, as the consequence of unnatural exhibitions of nervous force. Persons using these so-called remedies—laxatives, cathartics and purgatives—thus securing the movements of the bowels in the present, find that after their use it is more difficult to secure natural passages, and that the doses must be increased to produce any effect. Meantime the continued use of these drugs not only exhausts nervous force, but often creates inflammation of mucous surfaces, disturbing digestion and poisoning the blood.

HABITUAL NEGLECT OF BOWELS

Habitual neglect of the bowels is one of the most frequent causes of constipation. The rectum is naturally empty. As soon as the fæces are discharged into it there is usually a desire to relieve the bowels. If this is not done at once or if neglected for a short time the fæces are carried upward by peristaltic motion and back into the colon and the desire for evacuation thus passes away. This abuse long continued causes the bowels to become clogged up; they lose their contractiie power, the sensibility is destroyed, and in time the natural desire to relieve them will not be felt. This allows an accumulation which distends the rectum and even the colon far beyond its natural capacity. The rectum in its enlarged condition presses against the womb, causing debility and almost certain disease of that organ. In case of pregnancy, piles follow as a necessary consequence of pressure on the hemorrhoidal veins. Bearing-down pains, pains in the back, flatulence, colic, swelling of the veins of the legs, headache, sleeplessness, miscarriage and many other diseases are the result of over distension of the bowels.

Among women this habit of neglect is almost universal. An evacuation of the bowels is looked upon as an onerous duty, avoided as long as possible, then performed in a hurried and imperfect manner. Women who are

occupied in stores, offices or factories, where they are surrounded by men, often, through a sense of false modesty, fail to heed the demands of nature.

THE RETENTION OF URINE MOST UNHEALTHFUL

The retention of the urine beyond the time when it should be voided is a serious evil. Continued distension causes the walls of the bladder to relax and lose their elasticity. In its enlarged state the bladder presses against the womb in much the same manner as the over-distended rectum, and usually with the same evil result. The sensitive womb, placed as it is between the rectum and the bladder, is peculiarly liable to suffer from want of attention to either of these organs.

The inconvenient and often dangerous closet accommodations, usually provided in the country and smaller towns, tend to increase the natural aversion to promptly heed the demands of nature. This is usually placed some distance from the house, and constructed so openly as to expose the inmates to the rain in summer and snow and ice in winter. During the monthly period such exposure is exceedingly dangerous and it is little wonder that the sensitive or invalid woman dreads the ordeal and defers the same as long as possible.

Earth closets should be constructed to take the place of the accommodations now so common. These can be made at a trifling cost. The outhouse may be built close against the dwelling, or a convenient corner in a warm woodshed may be utilized for this purpose. Beneath the seat, a large galvanized pail should be placed, the bottom of which should be well covered with ashes or dry dirt. After using the closet, a supply of ashes or dirt—which may be kept in a convenient place and handled by means of a small shovel—should be added to the contents of the pail. The latter should be emptied and thoroughly cleansed daily. When these directions are carried out, such a closet may be placed near or even in a house with perfect safety.

ONE CAUSE OF WOMB TROUBLE

To constipation is due many of the serious disorders of the womb. This will be readily understood when it is seen that the enlarging womb—

especially in cases of retroflection—presses against the rectum, causing a collapse of that organ and thus preventing the escape of the fæcal matter. The result is that the weight of the matter thus accumulated presses upon the womb and tends to drag it down. In such cases all straining at stool has the same tendency, and should be carefully avoided.

The quality and quantity of the food taken has much to do with a healthy state of the bowels. They may become inactive from the use of very nutritious food. The concentrated forms of food, such as meat and the various preparations of fine flour, which have little waste but go almost entirely to the blood, give the bowels but little to do and they become constipated from want of use. Hot biscuits, rolls, pancakes, and muffins should not be eaten. Cakes, condiments, rich pies and all confections are too concentrated. Fat meats, dried and salt meats, veal, game, and other gross meats are constipating.

Fashionable dress is also one of the serious causes of constipation. Not only is this caused by lacing and by suspending the clothing around the waist, but by the inequalities of the clothing worn. The dress of the lower portion of the body is much less in proportion than that of the upper half, and the putting on of an extra skirt does little to increase the warmth. The cold air must necessarily get under the skirts, and the warmer the body the quicker the air will rush up. In this way the temperature of the body from the waist down is kept several degrees lower than from the waist up.

Every one knows that cold contracts the skin, veins and arteries, and propels the blood from the surface. Put your hand in ice water for a few moments and you will see it shrunk and colorless; the blood has been driven from it. This process is going on all the time where the dress is less in one part of the body than in another. In the coldest part the circulation becomes slower as the blood is driven away. Worse still, the blood is driven to other parts of the body where it is not wanted, where it clogs up and causes passive congestion.

The bowels, like the stomach, have their function to perform in digestion; they require the same amount of animal heat, they also require unob-

structed circulation. To expose the surface of the abdomen, causes great evaporation of needed heat; the digestion, robbed of its heat, its operation is interfered with, becomes gradually slower, all its functions slower and delayed, the consequence is serious, and constipation is the result. The reason why men are not so constipated as women is largely due to the fact that their dress keeps the whole of the body of an equal temperature, and the circulation unimpeded.

TREATMENT OF CONSTIPATION

It will readily be seen from the preceding that the treatment should be one of prevention rather than of cure. The same means, however, that will prevent constipation, if intelligently carried out, will usually effect a cure. Regularity in the habits is one of the most important points of treatment. The first effort should be to re-establish the natural habit of the bowels.

The desire for food recurs at regular hours each day because it is customary to eat at certain times. In like manner a habit of the body may be established, by which a desire to evacuate the bowels will follow at a given hour. It is not to be expected that this result can in all cases be attained in a day, a week, or even in a month. Obstinate cases of constipation require time in which to restore the normal function of the rectum, but the end accomplished is worth much more than the effort expended.

A new habit cannot be formed or an old one altered, without persevering effort in the right direction. The patient who is earnest in the search for health, should be encouraged to persevere for months in going to the water-closet without fail, once every day, at a certain hour, as regularly as the clock points to it. This is indispensable to a correction of the bad habit of constipation.

A very effectual part of this regular endeavor is to cause the mind to dwell upon the necessity of an evacuation and the process itself, for at least half an hour before retiring to the proper place. It is not a difficult matter with many persons to create a desire in this way. Let no consideration of convenience enter into this punctual effort at stool. Once in the proper

place the position should be an easy one, no inconvenient strain upon any muscle should be allowed, and the patient should be possessed with an entire sense of leisure, to perform the act completely.

The value of all these considerations, where faithfully followed, is incalculable, and very few cases can long resist them. Without them medicine will only temporarily relieve, instead of permanently curing, obstinate cases. Another matter of great importance, when an effort is made to have an evacuation, is to have the abdomen distended with food.

VEGETABLE AND FRUIT DIET

One should eat plentifully of vegetable diet, such as is by its bulk calculated to produce fullness. If one goes to the water-closet with a sense of fullness of the abdomen, success will be much more likely to follow. Should the regular time for making an effort be soon after breakfast, which is undoubtedly the best time, and the meal has not been sufficient to produce a sense of moderate distension, a full glass of water will complete that condition. Fruits of all kinds are especially good for constipation. Nothing is better than ripe, mellow apples, especially sour apples, without being divested of the rind; prunes, lemons, oranges, figs, the different kinds of berries, and tamarinds. The acids of these fruits increase the secretions of the intestines, while the rind and seeds, beside distending the bowels, increase their peristaltic action. Very acid fruits, as lemons and oranges, produce their effect only on account of the acids which they contain. They are excellent in the case of people whose stools are dry, hard and lumpy.

The above suggestions cannot be too faithfully followed. The character of the food exerts great—wonderfully great—influence upon the action of the bowels. I would recommend one, whether sick or well, to eat freely of fruits of all kinds. Make fruit a part of the everyday bill of fare, eat it in abundance, especially apples, and constipation will vanish even with no other treatment.

It is important also that the food eaten should be bulky in its nature. The stomach and intestines are like rubber and contract on themselves.

The stomach is full whether little or much food has been taken, and the same is true of the intestines. If the food is too concentrated, it is largely absorbed and there is not enough remaining to require a vigorous action of the bowels. The residue is also compact, dry and hard. A diet composed largely of fruits and vegetables seems to meet the wants of all those of costive habits. Among the vegetables, lentils, greens, turnips, squash, tomatoes, peas, spinach, asparagus, lettuce, rhubarb, green corn and cauliflower may especially be used to advantage.

ENTIRE WHEAT BREAD A HEALTH PRODUCER

Nothing is so important as the bread that is eaten. With many this one item forms a large proportion of all the food that is taken. It is imperative then that it should be such as will not cause constipation. Bakers' bread should not be eaten, as it is almost sure to have an astringent effect. The same is true of the bread made from the fine white flour in common use. Bread made from graham flour has been highly recommended, but on account of its coarseness, is not easily digested; it is far preferable, however, to white bread. When it can be obtained, flour made from the entire wheat should be used. In the entire wheat flour, the gluten is preserved; this makes bone and muscle, cures constipation, and is much richer in flavor than the ordinary white flour.

Cake and pies made from this flour—if they must be had—are much more wholesome. This flour is now made in different parts of the country and can usually be easily obtained. Rye and Indian meal also make a delicious and wholesome bread. Oatmeal and cracked wheat may also be prepared in various ways which make them loosening to the bowels, and valuable articles of food.

SHOULD WE DRINK AT MEAL TIME?

Regularity in the matter of eating should be observed, and the meals must not be taken in a hurried manner. If the food is not mixed with saliva, but swallowed with tea or coffee to wash it down, digestion is retarded. And if the food is eaten too rapidly, more is taken than is sufficient for nutriment. As a result, indigestion and constipation follow.

No drink should be allowed at meals, then the gastric juice acts directly on the food and dissolves it much sooner and easier than if weakened by drinks. Tea is likely to have an astringent effect, while coffee, though laxative in its nature, is too stimulating, and the reaction causes torpidity. Water should be freely taken an hour or two before meals, when the stomach is empty. The cells of the stomach will then be filled with a sufficient quantity of gastric juice to easily digest the food when taken. A full glass of water taken the first thing each morning will frequently keep the bowels in excellent condition, and is so simple a remedy that it should be in more universal use.

The use of a cold wet compress will in many cases prove beneficial. A napkin should be doubled several times so as to make a thick compress and at the same time large enough to cover the whole of the bowels. This should be wrung out of cold water, placed upon the abdomen and kept in place by a strip of dry flannel cloth. The compress should be applied on going to bed, and should be worn during the night.

ENEMAS AND MASSAGES

The enema is another method which may be employed to advantage where an immediate action of the bowels is desired. A fountain syringe should be used and the reservoir suspended as high as the tube will permit in order to give the water sufficient force. The enema should enter the bowels slowly and should be retained fifteen or twenty minutes. Light massage treatment may follow the enema and after this combination treatment a free evacuation is almost sure to follow. Where inactivity of the rectum is the cause of constipation, injections of cold or tepid water will give tone to that organ and prove of great benefit. After a time, however, the injections lose much of their efficiency, and for this reason too much dependence should not be placed upon them. Should it be necessary to continue their use a little salt or Castile soap may be added to the water with advantage. Should it be necessary to resort to medicine, a tablespoonful of pure olive oil may be taken and the bowels thus relieved

should be kept free by the use of hygienic measures recommended in this chapter.

HOW TO OVERCOME CONSTIPATION

Exercise will not only prevent constipation, but is one of the very best means of treating the same. It is preferable that outdoor exercise be taken where possible, but special indoor exercise may be made to answer the same purpose. To some it may seem that such simple means can be of little value in treating an obstinate disease, but simple as these means are, if patiently and thoroughly carried out, they cannot fail to alleviate, if not completely cure, the most obstinate cases. At the same time, they strengthen the whole body and thus prepare it to the more easily resist all other diseases. Such exercise should be taken as tends to strengthen the muscles of the abdomen, give tone and vigor to the muscular tissue of the bowels, and develop the diaphragm and other respiratory organs.

Is it not reasonable to suppose that if the arm of the blacksmith becomes strong by exercise, that any of the muscles of the body may in like manner be strengthened? Exercise quickens the circulation of the blood, the lungs, responding to the rapid flow, require a greater amount of air for oxygenation, and respiration is quickened to obtain this supply. Every full breath taken imparts strong motion to the diaphragm, which in turn gives action to the contents of the abdomen. Hence the value of full and deep breathing and the corresponding necessity for free, untrammeled dress.

It is by such exercises as climbing, rolling, crawling, jumping and playing generally that these contents are most disturbed. We are convinced that these are the means that nature prescribes to secure healthful development and power in these most essential parts of the body. As if to insure these healthful effects, nature has ordained that by respiration, as an efficient and constant means, these motions shall be secured to the alimentary canal. The abdominal contents may be considered as being located between two great muscular organs, the diaphragm and abdominal walls.

These muscles act conjointly and simultaneously and upon all the

included parts, causing them to play incessantly upon each, and subjecting them to a constant and gentle pressure.

One prime effect of exercise is the increase of the substance and the contractility of the abdominal muscular coverings. The walls of the abdomen become, in the absence of proper exercise, weak, flabby, and unnaturally distended when this occurs, the abdominal contents necessarily obey the laws of gravity, become dislocated and their functions consequently impaired. Well directed movements restore the power of these walls, the sinking organs are reinstated in their original position, and their function is recovered.

A great variety of motions may be given to one's own digestive organs suited to different constitutions, conditions of disease, development of the region, strength of the person, etc. A few forms are selected for the reader's attention, which if not entirely applicable for a given case, may at least prove suggestive of some other that will act more to the purpose.

EXERCISE NO. 1

Position.—Lying upon a couch, with the shoulders raised and the limbs in an easy position.

Varieties of Action.—Kneading.—The two fists strongly clenched may be pressed upon the abdomen so firmly as to cause the subjacent parts to yield before the pressure. This action is to be repeated for several minutes over the whole region of the abdomen.

EXERCISE NO. 2

Shaking.—The hands are applied to each side of the abdomen, and alternate pressure given to it, producing a somewhat rapid oscillating movement of all the abdominal contents included between the two hands.

EXERCISE NO. 3

Stroking.—Each hand is applied to the region of the groin, the tips of the fingers nearly meeting, then each hand is to be drawn slowly, with much pressure, upward and outward.

EXERCISE NO. 4

Circular Stroking.—The pressure of the hands is made to follow the course of the colon, beginning low upon the right side of the abdomen, passing around beneath the stomach, and terminating on the side opposite.

EXERCISE NO. 5

Clapping.—The extended hands are made to strike any portion of the frontal region of the abdomen. The blows should be given with each hand alternately at such a rate of rapidity and force as to produce no unpleasant sensations. If there is a point where pain is felt, the motion, at each successive application, should for a period be given to surrounding parts, approaching the tender part gradually until the pain disappears. The double fist may be used in place of the flat hand when it can be borne.

All the above massage movements may be applied in the standing position with the trunk a little bent forward or stooping.

EXERCISE NO. 6.

The patient should be seated upon the edge of a chair or other convenient seat, the position of the thighs at right angles and feet so extended as to form a large base. Raise the arms above the head and parallel to each other. Now, let the body fall slowly forward in a diagonal direction. that is, in a line directly over one thigh, bringing the breast in close contact with the knee. After this the body slowly resumes its original position. This action may be repeated five or six times on each side If it seems advisable that less effort should be expended in this movement the hands may be clasped behind the back instead of raised above the head. If more force is desired a light pair of dumb bells may be held in the hands, and the movement be performed as before.

EXERCISE NO. 7

The position of the body the same as in No. 6, with the exception that it may be necessary to secure the feet to the floor by placing

them under some firm object, or they may be held to the floor by another person if more convenient. The trunk is to be twisted a little toward the knee of one side, then allowed to fall slowly backward till it reaches a position approximating the horizontal, where it remains for a few moments. Then raise slowly to first position. This action may be repeated three or four times with each side. This movement calls powerfully into action the muscles of the abdomen upon either side; it also presses the bowels, and has a healthy action upon visceral organs.

EXERCISE NO. 8

Position same as in seven. Allow the trunk to fall directly and slowly backward till it reaches a position nearly horizontal, when it slowly returns to the commencing position. This action may be repeated four or five times.

EXERCISE NO. 9

Kneel upon the floor, supporting the knees with a cushion, upon which the knees should be placed as far apart as possible. Keep the trunk perpendicular, and place the hands upon the hips. Bend the trunk above the hips as far to one side as possible. Allow it to return and pass as far to the other side. The motion should be somewhat rapid, so that the momentum may be felt upon the convex side. This action may be repeated ten or twelve times. The movement acts upon muscles of either side as well as upon the spleen, liver and other organs situated in the region affected by the motion as well as upon the abdominal walls and viscera.

EXERCISE NO. 10

Seated upon a mattress, with legs extended horizontally, the hands should be placed upon the head. Bend the trunk slowly as far forward as possible. Then return it slowly to its primary position. This action may be repeated five or six times. The movement elevates the ribs, causes the abdominal muscles to contract, and elevates the contents of the abdomen.

EXERCISE NO. 11

The trunk lies in a horizontal position, face downward. Lock the arms, and elevate the body so that its weight will rest entirely upon

the elbows and toes. The trunk may be held in this position a greater or less time, according to the strength of the patient. The movement may be varied by raising and lowering the hips. This movement presses the contents of the abdomen toward the diaphragm, and often instantly relieves prolapsus of any of the pelvic organs, as that of the womb, vagina or rectum, restoring the parts to their natural condition and relation. Indeed, all other medical applications designed to meet the end here indicated, bear no comparison to this simple movement. By repetition the weak parts are strengthened, and a radical cure is effected.

In closing this chapter I wish to impress upon my reader this one fact, that constipation can be prevented much easier than it can be cured. Let the mother bear this in mind, let her save her child from constipation, and she will save her from a hundred and one disorders that will render her life a life of misery.

TABLE SHOWING CONSTIPATING FOODS

Laxative.—Rolled and cracked wheat, entire wheat bread, gems, mush from flour of the entire wheat, granula, bran gruel and jelly, fruit puddings, fruit pies, with the crust made of ko nut (a vegetable oil), all fresh acid fruits, especially apples; tropical fruits, like oranges, lemons, grape fruit, etc.; dried figs, French prunes and prunellas eaten raw, and stewed dried fruits. Of these peaches, plums, rhubarb and prunes are the best. Onions, celery, tomatoes, cabbage, raw, corn, squash, cauliflower, green peas, spinach, lentils, beets, etc., are the best.

Constipating.—Hot bread, white bread, white crackers, pastry made of white flour and lard, bread rolls, dumplings, etc., made with baking powders, cake, all custard puddings, salted meats, salted fish, dried meats, dried fish, smoked meats, poultry, cheese, boiled milk, tea, coffee, coffee made from wheat, corn, barley, toast, etc., etc.

Lean fresh meats, fresh fish, eggs, raw milk, barley, buckwheat, and corn meal have no marked action either way, unless in exceptional cases.

PART V

HELPFUL HINTS TO MOTHERS

CHAPTER XXII

REGULATING NUMBER OF OFFSPRING

MY OBJECT in this work is not to advocate the limitation of offspring, but to the over-burdened mother with a husband who has not yet learned the laws of self-control, and also to the weakly wife whose children must of necessity be weak, I offer a word of counsel.

To some women pregnancy is a nine-months' torture, and there are others to whom it is almost certain to prove fatal. Previous child-bearing may have proved that the mother cannot again undergo the experience without great suffering. In such cases an increase of family is not to be desired.

There are also many people eminent in scientific research who trace the origin of much human misery and crime to this thoughtless indiscriminate bringing of children into the world. Lord Derby in 1879 reasoned: "Surely it is better to have thirty millions of human beings leading useful and intelligent lives rather than forty millions of human beings struggling painfully for a bare subsistence." The remedy lies in preventing that condition.

WHEN CONCEPTION TAKES PLACE

It is a law of nature—to which there may be some exceptions—that conception must take place at about the time of the menstrual flow. If sexual intercourse occurs a short time before this period, the male germ may remain viable, and undoubtedly the female germ remains in the womb and retains its vitality a few days after the flow ceases. The conditions of

health, temperament and surroundings are so varied that no infallible law can be stated that will govern all cases. It may be said with certainty, however, that from ten days after the cessation of the menstrual flow until three days preceding its return, there is very little chance of conception, while the converse is equally true. An understanding of this simple law has enabled many to regulate the number of offspring at will. To do this, however, requires something more on the part of the husband than to blindly follow animal passion.

HOW TO PREVENT CONCEPTION

In order to prevent conception both husband and wife must not only understand the law, but must heed it to the letter. Self-restraint during this period of menstruation as above suggested must be closely observed. At first it may seem foolish, but experience will prove it to be a wise course to follow. If necessary husband and wife should occupy different apartments at this time.

THE SPERMATOZOA OR LIFE GERM OF THE MALE.

The question involves a problem of a very practical nature. Selfishness, the root of all evil, must here be exterminated if the husband desires to follow the highest law and be to his family and humanity the greatest good. He must, of necessity, be full of force, of will, of love! The law of cause and effect can no more be annulled than can the law of gravitation. He who creates the cause and sets in motion the current of activities that produce the effect must accept the effect. This method of procedure is ideal and well carries out Goethe's beautiful ideas, "The highest state of man is a tranquillity of soul in which he loves what he commands himself to do." All self-denial is in its very nature, temporal; all joy is in its nature, eternal.

HOW TO HAVE A BOY OR GIRL

The question is frequently asked, "Can a physician tell, before the child is born, whether it will be a boy or a girl?" Many eminent physicians

claim that this can be done, and base their opinions upon what they suppose to be a law of nature. This law is to the effect that if conception takes place in the early part of the menstrual period a female child will be the result; if in the latter part, a male child will be born. It has been observed that queen-bees lay female eggs first and male eggs afterward. The same is true of domesticated fowls, and from these facts, the observations made by physicians, and the experiments of stock-raisers, this law has been deduced. That it does not hold good in all cases, there can be little doubt, but, notwithstanding the exceptions, I think that there is good ground for the belief, and that in a majority of cases the supposed law will prove true.

From this it will be seen that if the unborn child is a girl confinement should take place at the date denoted by the pregnancy table, and that when a woman goes beyond this date it should prove a boy. This will generally be the case. Besides the above method of ascertaining the sex of the fœtus, the skilled physician can usually determine the same by the fœtal heart-beat, the pulsations being more rapid in the female than the male.

CHAPTER XXIII

GENERAL DISEASES---THEIR PREVENTION AND CURE

MANY physicians still contend that a disease must run its course. This can be proven to the contrary, by a method I have found available in every disease, from a common cold or headache to a contagious, or a violent sewer gas fever. If there is vitality enough to carry a patient through a disease by allowing it to run its course, then there is certainly enough vitality to arrest it before injurious drugs are added, to act as a further inducement to derangement.

The most dreaded diseases can be treated and prevented with absolute certainty, by the use of a few harmless remedies, and by proper attention to the hygienic laws. By regulating and restoring the capillaries of the system, we prevent or cure small-pox, typhoid, dengue, scarlet, yellow, remittent and intermittent fever, measles, diphtheria, peritonitis, cholera, cholera infantum, and all inflammations and congestions. To maintain a healthy action of the different tissues and apparatus of the skin, and the different sets of vessels found in them, attention to exercise, diet, respiration, clothing, bathing, light and air is of the greatest practical importance. Sickness, as a rule, is the penalty of physical wrong doing, yet Nature in her infinite wisdom, provides for its relief.

This provision consists in the power of the system to remove diseased conditions. The vital energies may be aided in their work of restoration in two ways: first, by removing all the causes that tend to produce disease or to continue it. Second, by assisting the forces of the system in their effort to remove disease.

HOW TO PREVENT DISEASE

First.—Ordinarily, in all acute diseases, the patient does not desire food, and if it is taken and digested, the disease will be greatly increased

by the stimulation of the chyle when converted into blood. If it is not digested, it will add to the prostration of the system, through irritation of the mucous membrane of the stomach. So that in all instances of acute disease, food should be withheld for a few days. Thirst may be allayed with cold water, barley or apple water, crust coffee, etc. When the patient recovers, his food should be given with regularity, in quantities not oppressive to the system, and not too frequently. In all instances where a physician is in attendance, the food should be prepared under his special direction, particularly after medicine has been withdrawn and the patient is convalescent. Many instances of recurring disease are due to the injudicious use of food.

Second.—By the action of the perspiratory glands of the skin, a great amount of waste matter is removed from the system. In disease, the action of these glands is much diminished. Their ducts also will become obstructed, if the waste matter is suffered to remain upon the skin. This inaction and obstruction very much increases the oppression of the diseased organs, consequently removing this condition, by attention to bathing and friction, is a powerful means of restoring the system to such a state as will expedite a return to health.

The reader should be deeply impressed with the idea that bathing, friction, and breathing extra quantities of pure air, greatly assist the return of health. In all cases of diseased action, the surface of the body becomes negative, reversing the natural or healthy condition, which is positive. In illness the blood recedes from the surface locally, or generally, the interior becomes positive, and diseased action results in one or more organs, causing such organ or organs to become abnormally positive, thus exciting a disturbance throughout the entire body through the action of the sympathetic system. A little medicine with the above suggestions will generally prevent the most contagious of diseases.

MATERIA MEDICA

Homœopathic remedies are prepared in the form of pills, powders and liquids, differing in degrees of strength. A dose, when prepared as a

powder, is an amount that can be held on a one-cent piece; when prepared as pills, from five to six every hour, and in the form of a liquid, five to six drops in half a glass of water. In the latter case, give one teaspoonful every twenty or thirty minutes. The frequency with which medicine is administered depends entirely on existing conditions. In chronic diseases, give from one to three doses a day. In acute diseases, remedies are given more frequently, every thirty or sixty minutes, or every two hours, according to the severity of the case. In regard to the strength of the medicine, the third attenuation is generally preferred of the vegetable remedies. Of the mineral compounds, such as iron, arsenicum, phosphates, silica, sulphur, carbonates of lime, phosphates of lime, mercury, bromides, etc., the sixth attenuation is preferable.

In the following pages are given diseases and their indications, with the corresponding remedy most needed.

ACUTE INFLAMMATION OF THE KIDNEYS

The symptoms are chilliness, vomiting, pain each side of the spine just above the hip bone, and painless swelling of the feet, legs and other parts of the body. The urine thickens if boiled, showing the presence of albumen. Causes.—It has been found by experiment, that out of two hundred cases, sixty-eight were produced by intoxicating drink and taking cold; sixty by exposure, and twenty-five by scarlet fever. Treatment.—Give the patient hot baths, exciting perspiration as soon as possible. In this way the skin is kept moist during the course of the disease. Bathe the spine and the region of the kidneys three or four times a day with alcohol, diluted one-third with hot water. Aconite 3d (see this chapter, Materia Medica) is the remedy used for the chilliness, fever, thirst and scanty urine, arsenicum 6th for dropsical swelling, mercurius corrosivus for mucus, blood or pus in the urine. Apis mellifica, sixth decimal trituration, may also be given in alternation with arsenicum for dropsical swelling. Diet.—Abstain from all solid food for a few days, using only slippery elm tea, crust coffee, and lemonade without ice.

BRIGHT'S DISEASE, OR CHRONIC NEPHRITIS

Symptoms.—Gradually increasing debility, a frequently irritable pulse, dyspepsia and vomiting. Pale, bloated appearance, occasional loss of appetite, dropsy, and frequent desire to urinate. The urine is light in specific gravity, and forms a thick white deposit of albumen when boiled. Causes.—Hereditary tendency, frequent exposure to cold, cold feet, gout, scarlet fever or dyspepsia. Treatment.—The secretions of the skin should be kept active by frequent hot baths. Turkish, Russian, hot water and alcohol baths are all excellent, and should be taken in a warm room two or three times a week. Arsenicum 6th and helonias 3d are the principal remedies. The condition of the stomach, bowels and skin should receive special attention, as the disease results principally from a defective condition of these emunctories. One of the most important features in the treatment is to maintain a free action of the skin, as by this means the blood is diverted from the kidneys, and purified. All stimulants and diuretics must be avoided.

TREATMENT OF BRIGHT'S DISEASE

The specific treatment for degeneration of the kidneys consists in the building up of the system by extra breathing, diet, bathing, and rest from mental worry. Bathe the lower half of the back, also base of brain, if pain exists, and the bowels, if inactive, with alcohol and hot water, equal parts of each. Bathe and rub freely every other night, using only cold water over the parts with a sponge or coarse cloth, then drying thoroughly. Diet.—The diet given here is unlike that usually prescribed for Bright's disease. The most nourishing food is selected, that which does not contain sugar or starch, as these ingredients do not give strength but only produce heat, thereby causing inflammation. Bread made from entire wheat flour, beef, mutton, tongue, oysters, raw or cooked without flour, and all kinds of fish or poultry not cooked or thickened with flour. Lettuce, cucumbers, onions, asparagus, cold slaw, celery, string beans, sour

apples, peaches with cream, strawberries without sugar, coffee and tea in moderation, milk and buttermilk are all beneficial.

Eat slowly, in moderate quantities, and take as little liquid as possible at meals. Sleep eight hours of the twenty-four. Patients in the last stages of the disease have been perfectly restored to health, under the above treatment, even when able to pass only two-thirds of a teaspoonful of urine at a time, which, being set in the sun, would almost entirely coagulate into albumen.

DIABETES

Definition.—A constitutional disease characterized by an excessive discharge of pale, sweet and heavy urine, containing grape sugar. Diabetes is a morbid condition of the blood, characterized by an abnormal increase of sugar. In healthy blood, it exists in an extremely minute quantity, and is most abundant a short time after meals. Causes.—Diabetes is considered by most physicians a nervous disease, and incurable. There is a defect in the chemical process by which the sugar and starch of the food are appropriated to the nutrition of the body. The natural process is interrupted at the point where grape sugar is produced, and the excess of this substance in the blood is carried off by the kidneys. Treatment.—The same as prescribed for Bright's disease. Deep breathing, and hot baths, concluding by sponging off with cold water, are most important. All diseases of the kidneys are curable under this treatment. The remedies used are, phosphoric acid water, prepared as lemonade, for the thirst, and uranium nitricum, third trituration. Give a powder every night. Diet.—The same as for Bright's disease.

CRAMPS

Cramps are a violent involuntary action of a few of the voluntary muscles. Causes.—Cramps of the muscles of the stomach and bowels are caused by worms, or by indigestible food, poisons or ice water. Cramps of the legs and arms occur in cholera. They may also be produced by exposure to cold, as in bathing, or may be the result of a deficient supply of blood to the parts. Treatment.—Hot poultice—a quart of scalded corn

meal and a tablespoonful of red pepper, placed between two flannel cloths and laid over the bowels. If from worms, give cina or santonine, night and morning.

SIMPLE CHOLERA

An acute catarrhal inflammation of the stomach and intestines. Symptoms.—Nausea, vomiting, purging of bilious or watery fluid, thirst, coldness, and sometimes cramps of the legs and abdomen. Treatment.—If there is coldness and prostration, or cold sweat, give two to three drops of the strong tincture of veratrum viride, one drop in a glass of water; dose, one teaspoonful every ten minutes. If there is vomiting and purging, give also veratrum alba once an hour. If thirst predominates, give arsenicum 3d. Apply heat to the extremities, also hot capsicum. Prepare poultices of corn meal mixed with boiling water, spread between flannels, and lay over the abdomen and stomach.

ASIATIC CHOLERA

Symptoms.—Sudden prostration of strength, coldness of the surface, with great internal heat and thirst, cramps in the thighs, legs, toes and fingers, cold tongue and breath, vomiting and purging resembling rice water. In the advanced stage, the pulse is hardly perceptible, the eyes are sunken, the face is pinched, the voice reduced to a hoarse whisper; there is extreme restlessness and thirst, with cold, clammy sweat.

ST. VITUS DANCE

Symptoms.—St. Vitus dance, or chorea, is defined as a nervous disease, the seat of which is supposed to be at times in the brain, and at other times through the entire nervous system. By degrees, the voluntary muscles of the whole body become affected, the limbs jerk about in every possible direction, and the face is contorted by all sorts of involuntary grimaces, much to the annoyance of the patient. Children between the ages of five and fifteen are most subject to this affection. Treatment.—Plain, nutritious diet. Bathe the body in hot water, and sponge off with cold. If constipated, give a powder of nux vomica every night. If there is a pale,

bloodless condition, give ferrum phosphoricum, first decimal trituration, one grain after every meal. If there are symptoms of coma, give santonine. If there is delayed menstruation, give pulsatilla every morning.

COLDS

Treatment.—For muscular soreness and tenderness, headache, cold feet, stiff, sore feeling over entire body, take aconite and bryonia in alternation, wrap up warmly, and promote perspiration. See catarrh, neuralgia and sore throat.

CATARRH

If precautions are taken to maintain an increased capillary action over the entire surface of the body, until normal and healthy action of the mucous membranes be established, and the treatment repeated with every new cold, catarrh of any kind could not become chronic. If the feet are permanently kept warm by proper dressing, and bathing from two to three times a week, as described in previous chapters, by placing in hot and cold water alternately, from thirty to forty minutes at a time, one of the greatest causes of disease would be removed. Patients who are subject to the use of tobacco in any form, need never look for a permanent cure or relief from catarrh or disease of any kind until this habit is overcome, and the system rid of the tobacco poison. There are numerous nervous coughs that arise from irritation of the mucous membranes of the bronchi and capillaries of the lungs. Give two to three doses of nux vomica, third trituration, two to three times a day, dry on the tongue, for two or three days, and the cough readily disappears, but not permanently unless the tobacco habit is discontinued. With Turkish, or hot baths of any kind, taken twice a week, inducing free perspiration, to eliminate the offending poison of the tobacco from the system, the most obstinate catarrh can be permanently cured if the treatment is persevered in. Nux vomica is an antidote for tobacco, and the best local and constitutional tonic in the Materia Medica. Deep extra breathing is also an important essential.

COLIC

Causes.—Exposure to cold, also indigestion, worms, and lead poisoning. It is distinguished from inflammation of the bowels, in that pressure relieves pain where in inflammation pressure is painful. Treatment.—The hot corn meal and red pepper poultice placed between flannel cloths, and laid over the entire bowels. Wrap the patient warmly, and give a little nux vomica, third attenuation, in some water.

CORNS

Treatment.—Bathe the feet well until the hard skin is softened about the corn, and apply strong nitric acid to the horny center, with a camel's hair brush. Then take a sharp penknife and peel away the soft, deadened skin. Apply the acid two or three times during the treatment. The acid destroys the horny center

COUGH

Causes.—Taking cold, but is usually a symptom of some other trouble, such as bronchitis, dyspepsia, or consumption. It may also result from the use of tobacco, which produces a nervous cough. Treatment.—Cough, with a dry, inflamed throat, requires belladonna, which should be taken as frequently as the severity of the case may require. For dry, hard, painful cough, with stitches in the chest, bryonia should be given. If the cough is caused by irritation, owing to the poison of tobacco, give nux vomica, night and morning. For loud, hollow, ringing cough, give spongia. For short, hacking cough, with tight feeling in the chest, and frothy rust colored sputa, give phosphorus three times a day.

DIARRHŒA

Causes.—Usually, the causes are, taking cold, indigestion, or dentition. Symptoms.—Frequent fluid evacuations from the bowels. Treatment.—If the attack is caused by taking cold, aconite should be given, in connection with a hot foot bath and hot applications over the bowels. If the

result of indigestible food, nux vomica is the most efficient remedy, in connection with the hot local applications. Food should be taken in fluid form, at regular intervals. Corn starch is excellent, as well as oatmeal or farina gruel. When diarrhœa is the result of teething, use camomile.

DROPSY

Dropsy may be induced by chronic or acute disease of the kidneys, or by chronic disease of the liver. Dropsy of the brain or chest, by inflammation of the serous membranes. Symptoms.—Dropsy, from disease of the kidneys, may early be noticed under the eyes; it also begins at about the same time in different parts of the body. It is accompanied by pain in the region of the kidneys, and scantiness of the urine. If the cause is in the liver, the swelling begins in the cavity of the abdomen, afterwards commencing in the feet, and working upward in the same manner as in cases of heart, or kidney disease.

Dropsy of the brain is usually confined to children.

Dropsy of the chest is generally the result of chronic pleurisy, as manifested in the swelling of the affected side of the chest. Treatment.—Arsenicum is one of the best remedies for dropsy of the tissues, from whatever cause. Apis mellifica is the best known remedy for acute dropsy arising from disease of the kidneys. Hot baths are excellent; also bathing and friction over the region of the kidneys, with alcohol. Excite capillary action by wearing a capcine plaster over the kidneys for two days, then remove and use the alcohol again in the same manner. In this way a healthy action of the kidneys will be restored. Keep the feet warm, and bathe them every other day in hot and cold water alternately.

DYSPEPSIA AND INDIGESTION

Causes.—Dyspepsia may be produced by various causes. It may result from an abnormal condition of the nervous system, or from over stimulating food or drink, such as mustard, pepper, fermented liquors, ice cream, tea or coffee. Worry and anxiety of the mind, or depression of the spirits from any cause, are the principal sources of dyspepsia. So long as the

mind is dull and gloomy, from disappointments in business or love, the effect is the same—direct oppression of the vital forces. All food becomes poisonous to the system in time, if retained in the stomach until soured and fermented. Sour and fermented food produces sour and acid blood. By the action of blood thus impoverished, the mind becomes permanently gloomy, causing chronic dyspepsia. Symptoms.—These complaints are readily recognized by the following conditions, namely, accumulation of wind, and formation of acids in the stomach. Patient feels unfit for mental or physical labor; hands and feet generally cold. Want of appetite, or morbid craving for sour, spicy, and acid articles. Gradual failing in flesh and strength. Treatment.—Correct diet is of the utmost importance. Plain food is necessary, with no fluids at meals. Soups and fluids of every kind should be taken before meals, or two hours after. If corpulent or lean, avoid all sweets, and all strong acids. Abstain from a meal frequently, to give the stomach rest. Take hot baths of all kinds, keeping the feet warm by bathing frequently, and wearing thick-soled shoes. The remedies for dyspepsia are, nux vomica, subnitrate of bismuth, and lacto pepsin. Mix, and take two grains after each meal.

EPILEPSY

Symptoms.—Sudden loss of consciousness, and motor disturbances in the form of more or less severe convulsions. These attacks recur at irregular periods in the beginning of the disease. Causes.—Hereditary disposition, digestive disturbances, over-exertion, and great fatigue. The loss of consciousness may be either sudden and complete, the patient being stricken down as if by lightning, or it may be a little more gradual; in this case, the patient, when falling, partly realizes his condition, and endeavors to save himself from injury.

Treatment.—The patient should be firmly held, or sufficiently restrained to prevent self-injury. After the attack, allow him to sleep as long as possible. Belladonna should be given in the premonitory stage, if there is congestion in the face, or headache. Nux vomica is useful between attacks, to regulate the digestive functions.

ERYSIPELAS

This disease is caused by exposure to cold, by wounds, or contagion. At first, the eruption is of a bright red color, later assuming a livid hue. There is a constant burning of the skin, and sometimes pus is formed and discharged. Treatment.—Veratrum viride is the specific remedy for this disease. Aconite and belladonna, in alternation, are the best remedies in the early stage. Cantharis, ten drops in one pint of water, is the best local application. Wet a linen handkerchief in the lotion and spread over the face.

FOREIGN BODIES IN THE EYES

Treatment.—Take one or two grains of ground flaxseed and place under the eyelid. The foreign body will be taken up by the flaxseed as it moves about in the eye. The process is painless.

FELON

Causes.—Blows and bruises, or an impoverished state of the blood. Symptoms.—Loss of appetite, with headache, backache, and pain in the limbs. The patient is feverish, and unable to sleep, with flushed face and strong pulse. Treatment.—Dip the felon in lye water, to keep it soft, or apply a soap poultice. When the part begins to swell, lance it to the bone. Give two grains of silica, third decimal trituration, three to four times a day.

GRAVEL

Causes.—Exposure to cold, extreme fatigue, hereditary tendency, and luxurious living. Symptoms.—Uneasiness in the back and loins, thirst, a dry tongue, and constipation. Treatment.—Avoid all intoxicating drinks, taking soft or boiled water only. Holland gin, given in water, will aid in dissolving the stone; camomile will also have this effect, and tends to prevent its formation.

GOITRE

Goitre is an enlargement of the thyroid gland, or a thickening of the neck, and is of slow growth. In time this gland becomes enormously

swollen, producing shortness of breath, and, in some cases, obstructing the circulation of blood in the brain. Treatment.—Give two grains of spongia three times a day. As external treatment, bathe the neck daily with cold salt water.

GOUT

This is an inflammatory disease produced by morbid matter in the blood. Causes.—Luxurious living and the use of intoxicating drinks; also taking cold. Symptoms.—Pain in the small joints, commencing in the great toe, the heel, the knee, the hand, the wrist, or the elbow. Treatment. —Wrap the affected parts in cotton batting. Make a liniment of one pint of sweet oil and one ounce of ammonia. Mix, and apply freely. Give colchicum tincture internally, four or five drops in a little water, every hour. Also make frequent use of hot baths. Diet should be light, with no animal food or pastry.

HAY FEVER

This is a supersensitive condition of the mucous membrane, aggravated by the pollen of various growths, principally the ragweed. Treatment.—Turkish baths, or hot baths of any kind, concluding with cold water. Electricity, scientifically applied, is also beneficial. The positive pole should always be used internally over the highly irritable mucous surface, with a small nasal electrode covered with fine sponge. Make the bath, of some kind, a daily custom. Patients addicted to the use of tobacco cannot be cured unless this habit is discontinued, as the poison of tobacco antidotes any remedy.

HEADACHE

Treatment.—When headache results from cold, bathe the feet in hot and cold water, alternately. Aconite is the remedy. For periodical headaches, omit food twenty-four hours. Ignatia 3d is the remedy. Headache occurring before and after menstruation should be treated with nux vomica and pulsatilla; if caused by anxiety or excitement give ignatia, third attenuation, in water, every hour. Bryonia will cure a headache

which is more painful when the patient moves about. This headache is characterized by irritability.

PALPITATION OF THE HEART

The most common disease of the heart is palpitation, caused by mental troubles, dyspepsia, formation of gases, suppressed menstruation, or an impoverished condition of the blood. If the disease results from mental troubles, give ignatia. If from dyspepsia, nux vomica and pulsatilla. If caused by worms, give santonine or cina. Pulsatilla is the best remedy if the patient is suffering from suppressed menstruation.

FAINTING

Causes.—Sudden fright, violent injuries, severe pains, oppressive odors, the presence of indigestible matter in the stomach, loss of blood. Treatment.—Ammonia or camphor held to the nostrils. The patient should be laid flat on the floor, or a bed, and the feet placed first in hot water, then in cold.

HYSTERIA

Hysteria is a disease of the nervous system, confined almost wholly to females. Usually, the attacks are sudden and irregular, though in some cases, periodical. The patient bursts into a fit of weeping, soon to be followed by convulsive laughter. The disease generally makes its appearance before puberty, and is supposed to have its origin in deranged uterine action, also debility and nervous exhaustion. Ignatia is the remedy for nervous exhaustion; macrotin and pulsatilla for the menstrual derangement. Exercise, deep breathing and outdoor life are very important.

INFLAMMATION OF THE BLADDER

Causes.—Taking cold, intoxicating drink, cold feet, too long retention of urine. Symptoms.—Pain and weight in the sides and lower part of the abdomen. Treatment.—Aconite is the remedy in the first stage, given in alternation with cantharis. Rest in bed is necessary. Apply external heat

over the bladder, give mucilaginous drinks, plain food, and see that the bowels are kept regular

PERITONITIS

Causes.—Absorption of animal poisons after childbirth, surgical injuries. Ushered in with chills, fever, and small, quick, hard pulse. Also extreme pain, and tenderness of the abdomen.

INFLAMMATION OF THE BRAIN, OR MENINGITIS

Symptoms.—Meningitis is characterized by rigors, a hot, dry skin, hard and frequent pulse, hurried respiration, depression of spirits, vertigo, intense headache, loss of appetite, vomiting and constipation. The eyes have a wild expression. Delirium sets in early, the patient being noisy, violent and restless. These symptoms continue three or four days, after which the fever abates, the pulse flags, the tongue is dry and brown, and the delirium is apt to pass into stupor or coma. In a few days there is extreme prostration, the symptoms resembling those of typhus fever. When the disease terminates favorably, the improvement is gradual.

Treatment.—Gelsemium or veratrum viride every half hour. Bathe the feet in hot water, then cold, alternating in this way for thirty minutes, two to three times a day, gradually increasing the temperature of the hot water, and decreasing that of the cold. Also bathe the head in hot water, then in cold. In the intervals of treatment, keep a wet cloth on the head. Induce free perspiration. The nourishment should be mild, such as lamb broth, and gruels made from the cereals.

SOFTENING OF THE BRAIN

Causes.—Imperfect nutrition, alcoholic drinks, tobacco, injuries to the brain, growth of tumors upon the inner surface of the skull.

Symptoms.—Similar to those in inflammation of the brain. There is an impairment of the intellectual faculties, embarrassment in asking questions, melancholy, drowsiness, particularly after eating, impaired vision and hearing, and pricking and witching of the limbs, sometimes accompanied by pain, or by numbness. In the inflammatory form, the limbs are

more frequently the seat of painful cramps, stiffness, and contraction. There may be nausea, constipation, difficult micturation, and labored respiration, which becomes stentorious towards the last. A state of coma ensues, which may pass off in a day or two, but only to return and become more profound, until terminating fatally. Softening of the brain occurs more frequently after the fiftieth year, although it is possible at any period of life.

Treatment.—Turkish and vapor baths, hot and cold foot baths, daily. Rest from mental application is necessary, also abstaining from all liquors. If addicted to the use of tobacco, the habit must be discontinued. Diet.—Select food from that prescribed for lean and nervous people. The best remedies are, phosphoric acid prepared as a lemonade, and nux vomica, 3d trituration, three times a day. Take plenty of outdoor exercise, and live in an atmosphere of music and agreeable company. This will assist in maintaining a cheerful frame of mind.

INFLAMMATION OF THE BREASTS

This develops chiefly during the period of nursing. Causes.—Stagnation of the milk within the glands, from taking cold, or external injuries. Symptoms.—Cold chills and rigors, with severe pain in the breasts, which feel hard and congested. Treatment.—Aconite every half hour. Prepare a poultice of flaxseed, adding a tablespoonful of black pepper. Mix thoroughly and spread on a cloth the size of the breast, cutting a hole for the nipple. Soak the feet in hot salt water, and remain in bed, covered warmly, keeping an even heat over the entire body.

EARACHE

Causes.—Taking cold, the extension of inflammation, as in scarlet fever, chronic catarrh, etc. Symptoms.—Buzzing in the ears, with pain, headache, and dullness of hearing. Treatment.—Aconite in the first stage, copious hot douches into the ear by means of a fountain syringe. Also mix a few drops of chloroform with a teaspoonful of cosmoline, place on cotton batting and lay in the ear.

INFLAMMATION OF THE THROAT

This is an inflammation of the upper and back portions of the throat. Symptoms.—Pain, swelling, and a dark red color of the mucous membrane. In the chronic condition, ulcers may appear scattered over the surface. Treatment.—Belladonna, 3d attenuation. Gargle the throat with alcohol and water, equal parts, every hour.

JAUNDICE

Symptoms.—Yellowness of the skin and whites of the eyes. Treatment.—Febrifugo No. 1, of the Mattei remedies, hot baths of all kinds, and correct living.

NEURALGIA

This is a functional disorder of some particular nerve. Physiologically, an irritation in the course of one or several sensory nerves. Causes.—Hereditary predisposition, malaria, exposure to cold, thinness of the blood. Treatment.—For constitutional debility, enrich the blood, and excite its circulation with hot baths. Iron phosphate, third attenuation, is the remedy. Keep the feet warm. Diet.—Bread made of whole wheat flour, eggs, vegetables, oatmeal at breakfast, and fruits. Indulge in plenty of pure air, and omit fluids at meals.

NERVOUSNESS

Treatment.—If caused by general debility, nux vomica is the best remedy, in connection with hot baths. If by mental anxiety, read chapter on mental healing. If the cause is disease of the uterus, use hot injections, two or three times a week. Pulsatilla and helonias, night and morning. Dyspepsia is one of the greatest sources of debility, causing various degrees of nervous disturbance. Remove the cause by eating with great precaution only such food, in small quantities, as is easily digested.

THE NOSE—ITS INDICATION, IN HEALTH OR DISEASE

General Observations.—An habitually pointed nose denotes derangement in the mesenteric glands of the bowels, and general atrophy. When

the nose becomes suddenly pointed in children, it denotes an impending spasm. A thick, swollen nose indicates inflammation, if accompanied by pain, heat and redness, or scrofula; rachitic diseases. If the nose becomes suddenly pointed during the act of parturition, it indicates internal hemorrhage, complete exhaustion, or threatening convulsions.

The pointed nose of a nursing mother indicates her complete unfitness for that office. When observed during severe illness, it is always a grave symptom, indicating extreme exhaustion and collapse.

A heavy motion of the nasal wings during respiration is a sign of impeded respiration, due either to asthma, pneumonia, croup, dropsy in the chest, or incipient paralysis of the respiratory muscles; also utter prostration.

Circumscribed redness of the point of the nose, cheeks, and forehead, with paleness and coldness of the other parts of the face, denotes, in pneumonia, that suppuration has taken place.

A coppery, shining redness of the root of the nose is a sign of existing syphilitic ulcers within the nose.

An habitually cold nose is found in disordered states of the abdominal viscera, in dropsical complaints, and in chlorosis.

A grayish, lead-colored nose is found in dropsy of the chest and pericardium, in induration of the lungs, and in some malignant forms of typhoid fever.

Single, lead-colored stripes on the nose have been observed in obstruction of the portal vein.

A bluish color of the nose is found occasionally in apoplexy, croup, diseases of the lungs, heart, and larger blood-vessels; in short, in all morbid conditions which cause stagnation of the blood.

Brownish, yellowish spots on and over the nose, in the form of a saddle, usually indicate a diseased liver, or chronic leucorrhœa.

"A blackish fur at the base of the nostrils, is found in typhus epidemic, dysentery, cholera, in fact, in any condition of great prostration."—Cowperthwaite.

HEARTBURN OR WATER-BRASH

Drink crust coffee in place of water, both at meal time and otherwise. Take as a remedy the following:

Tinct. of night-blooming cereus, 6 drops, in full glass of water. Dose: Tablespoonful every hour until relieved. Take both night and morning one to two teaspoonfuls of pure olive oil.

GAS IN THE STOMACH

Mix from 6 to 10 drops of aqua ammonia in glass of warm water; drink slowly

GUMBOIL

A decayed root of a tooth causes inflammation and abscess of the gum, which abscess breaks and becomes a gumboil.

Foment the outside of the face with a hot camomile and poppy head fomentation, and apply to the gumboil, between the cheek and the gum, a small white bread and milk poultice, which renew frequently. As soon as the gumboil has become quiet, by all means have the affected tooth extracted, or it may cause disease, and consequently serious injury of the jaw. Whenever the patient catches cold there will be a renewal of the inflammation of the abscess, and the gumboil, and, as a matter of course, renewed pain, trouble, and annoyance. Decayed fangs of teeth often cause the breath to be offensive.

EARLY STAGES OF CONSUMPTION

Spitting blood is always to be looked upon with suspicion; even when a youth appears, in other respects, to be in good health, it is frequently the forerunner of consumption. It may be said that, by mentioning the fact, I am unnecessarily alarming a parent, but it would be a false kindness if I did not do so:

"I must be cruel, only to be kind."—*Shakespeare.*

Let me ask, when is consumption to be cured? Is it at the onset, or is it when it is confirmed? If a mother had been more generally aware that

spitting blood was frequently the forerunner of consumption, she would have taken far greater precautions. Consumption more frequently shows itself between the ages of fourteen and twenty-one, after that the liability of the disease gradually diminishes, until at the age of forty-five it becomes comparatively rare. Boys are more prone to this complaint than girls. It may be well for a parent to recognize the symptoms in order that she may seek aid early. It is perfectly hopeless to expect to cure consumption unless attended to at once, as the only effectual good in this disease is to be done at first

SIGNS OF CONSUMPTION

Consumption creeps on insidiously. One of the earliest symptoms of this dreadful scourge is a slight, dry, short cough, attended with tickling and irritation at the top of the throat.

There is usually hoarseness, not constant, but coming on if the patient is tired, or toward the evening. There is also a sense of lassitude and depression, shortness of breath, a feeling of weariness on the slightest exertion. The hair of a consumptive person usually falls off, and what little remains is weak and poor; the joints of the fingers become enlarged, or clubbed as it is sometimes called; the patient loses flesh, and, after some time, night sweats make their appearance, then we may know that hectic fever has commenced.

Hectic fever begins with chilliness, which is soon followed by flushings of the face and burning of the hands and feet, especially of the palms and soles. This is soon succeeded by perspirations. The patient has generally two decided paroxysms of hectic fever during the day, one at noon which lasts about five hours; the other in the evening, which is more severe, and ends in violent perspirations; these perspirations continue the whole night through.

The expectoration at first is merely mucus, but after a time it assumes a characteristic appearance; it has a roundish, flocculent, woolly form, each portion of phlegm keeping, as it were, distinct; and if the expectoration is stirred in water, it has a milk-like appearance. The feet and ankles swell. The perspiration comes on in the evening and continues all night—

more especially toward morning, and while the patient is asleep. During the time he is awake, even at night, he seldom sweats much. The thrush generally shows itself toward the close of the disease, attacking the tongue, tonsils, and soft palate, and is a sure harbinger of approaching death. Emaciation rapidly sets in.

The most common exciting causes of consumption are slighted colds, neglected inflammation of the chest, long continuance of influenza, allowing wet clothes to dry on the body, too little exercise, etc.

TREATMENT FOR EARLY STAGES OF CONSUMPTION

The health should by all means be the first consideration; throw books to the winds; if he is at school, take him away; if he is in trade, cancel his indentures; if he is in town, send him to a sheltered healthy spot in the country, the mountains are best. Be particular in his clothing, taking special care to keep his chest and feet warm. The feet must be carefully attended to; they ought to be kept both warm and dry, the slightest dampness of either shoes or stockings should cause them to be immediately changed.

The diet must be nutritious and generous; the patient should be encouraged to eat plentifully of beef and mutton. There is nothing better for breakfast, where it agrees, than milk; indeed, it may be frequently made to agree by previously boiling it. Wine and spirits must on no account be allowed. I caution parents in this particular, as many have an idea that wine is strengthening, and that rum and milk is a good thing to cure or prevent a cough.

If it is summer, let him be much in the open air, avoiding the evening and the night air. If it is winter, he should, unless the weather is mild for the season, keep within doors.

DEEP BREATHING A MAGIC WAND IN CONSUMPTION

Loosen thoroughly every band, corset and appendage that obstructs, and never tighten them again. Seek an easy position, in a rocking-chair, or on a lounge, with shoulders and head a little inclined.

Now, with perfect calmness, draw, slowly, the air into the lungs through the nostrils, deeper and deeper; be very careful to give attention to calmness. You may do yourself much harm here, as violent, spasmodic effort, inflating only the top of the lungs, will make you more nervous, and be harmful.

Natural law is imperious and enforces exact justice. Do not hold your breath, but draw the air in calmly, deeper and deeper, and exhale as calmly as possible. The will has much influence in allaying nervous and spasmodic tendencies in the chest and system, such as a tendency to cough, and other manifestations of disturbed function. Keep this up a half hour or so at a time, and as often as you wish in repetition. As you proceed, the ability to breathe deeper and deeper and more calmly will be marked. Do not fail to use the agency of the will to preserve a perfectly calm state when you are taking these inhalations.

Keep these exercises up. No great work is accomplished in a day; remember you are now to be made a new being; time and will are required, and are both indispensable to success. A marked change will be perceptible very soon if your work is done aright and well. At night when you retire, and through the night, when you awaken, you will find this deep breathing to be a magic wand; within the reach of all is this elixir of mind and body. Will and a little intelligence is the price demanded. This habit persisted in, will, in time, give a breathing capacity that cannot fail to astonish the one who persists in it. And we feel certain it will effect a cure. It is a magic balm, and were it costly, would be sought with avidity

SURE CURE FOR LA GRIPPE

Make a foot-bath as follows: Have two shallow pans, one containing very cold, and the other very hot water. Dip your feet from one to the other, holding them in each pan as long as possible. Have a kettle on the stove containing boiling hot water; as you proceed with the bath you can gradually endure a greater degree of heat and of cold. Keep the temperature at the greatest extremes you can endure. Continue this an hour at a time two or three times a day, fast two or three days,

and your la grippe will loose its grip. I have cured numerous cases thus, some taken when very severe, while I have known others to lie for weeks under other treatment, the result being a broken down constitution for the remainder of their days in the flesh. All congestion of internal organs, such as pleurisy, cholera morbus, cramps of any description, headache, etc., can be easily cured through this simple plan.

BRIGHT'S DISEASE CURE NO. 2

Get a good syringe, and upon retiring at night inject into the bowels a half pint of pure, soft water, lukewarm. Hold this over night. Upon rising in the morning, take two quarts and hold as long as possible. This will cure Bright's disease if continued faithfully, and will insure old age with a bright eye and mind if persevered in.

Reader, let me now say that you are in existence for all time, and you should strive to think rationally on all themes concerning life. Health, both of mind and body, concerns us more than any other theme. Unless we possess it, we cannot fail to be vacillating, undecided, the prey and victim of our own weakness. Cultivate in yourself independent thought, broaden the mind, and live to make somebody happier and better for your being. Fear nothing under the blue dome of the stars but yourself. You alone are to determine whether black or white, success or failure, marks your path in life. Ignorance is the great arch-fiend, who, hid in the jungles of rudimental growth, entices you into thorny paths where, lost to a knowledge of our true state, we grope around in the mazes of darkness, a ready prey to superstition, precedent, and the vagaries that float about and around us, rife as malaria. Common sense is a good stock in trade to keep always on hand. A knowledge of our right place in Nature and the placing ourselves in such place, is the true and only savior.

CHAPTER XXIV

ACCIDENTS AND THEIR TREATMENT

IF a child's clothes take fire, lay him on the floor, and roll him in the rug, in the carpet, or in any thick article you may have at hand; if it is woolen, so much the better, or roll him over and over on the floor; by excluding the air, the flame will go out. It is important that a mother should cultivate presence of mind. If parents were better prepared for such emergencies, such horrid disfigurations and frightful deaths would be less frequent.

TREATMENT FOR A SCALD

Scalds, both of the mouth and throat, from a child drinking boiling water from the spout of a tea-kettle, are most dangerous.

The best immediate application to a scald or a burn is flour and lard. It ought to be thickly applied as a paste over the part affected, and kept in place with a bandage, or with strips of old linen. If this is done, almost instantaneous relief will be experienced, and the burn or scald, if superficial, will soon be well. The advantage of flour as a remedy is that it is always at hand. I have seen some extensive burns and scalds cured by the above simple plan. Equal parts of lime water and linseed oil make an excellent application for a burn or scald, and will prevent blistering if faithfully used at once.

Prepared lard—that is, lard without salt—is an admirable remedy for burns and scalds. The advantages of lard are: It is almost always at hand; is very cooling, soothing, and unirritating to the part, and gives almost immediate freedom from pain. It effectually protects and sheathes the burn or scald from the air. It is readily and easily applied; all that has to be done is to spread on pieces of old linen or on lint, and apply smoothly to the parts affected, keeping them in their places by means of bandages.

Cold applications, such as cold water, cold vinegar and water, and cold lotions, are most injurious, and in many cases, even dangerous. Scraped potatoes, sliced cucumber, salt, and spirits of turpentine, have all been recommended, but in my practice nothing has been so efficacious as the remedies above enumerated.

Do not wash the wound, and do not dress it more frequently than every other day. If there is much discharge, absorb it with soft linen, but do not, on any account, let the burn be rubbed or roughly handled.

After the first two days, if severe, the burn or the scald may require different dressings.

If the scald is either on the leg or foot, a common practice is to take the shoe and stocking off. In this operation the skin is also at the same time very apt to be removed. Both the shoe and the stocking ought to be slit and taken off, so that neither unnecessary pain nor mischief may be caused.

ACCIDENT TO THE EYE

If a bit of quicklime should accidentally enter the eye of a child, instantly, but tenderly, either by means of a camel's hair brush, or by a small spill of paper remove any bit of lime that may adhere to the ball of the eye, or be in the eye, or on the eyelashes. Then well bathe the eye, using vinegar and water, one part of vinegar and three parts of water. Bathe the eye for at least a quarter of an hour. The vinegar will neutralize the lime, and will rob it of its burning properties.

Having bathed the eye with vinegar and water for a quarter of an hour, bathe it for another quarter of an hour with warm water, after which, drop into the eye two or three drops of the best sweet oil. An eye-shade made of three thicknesses of linen covered with green silk should be worn until the eye has fully recovered. If the above rules are not promptly and properly followed the child may irreparably lose his eyesight.

If there is grit, sand, dust, a particle of coal, a gnat, a hair, or an eyelash in the eye, it ought to be tenderly removed by a small tightly folded paper spill, holding down the lower lid with the forefinger of the

left hand, and the eye, if inflamed, should be frequently bathed with warm milk and water. Generally as soon as the cause is removed the effect will cease, and after treatment will be unnecessary. Any foreign substance, however minute, in the eye is very painful; but a piece of burning lime is excruciating.

CHOKING

Often, a child fills his mouth full and swallows lumps of food in such haste as to choke.

Treatment.—Instantly put your finger into the throat and feel if the substance is within reach; if it is food, force it down, and thus liberate the breathing; should it be a hard substance, endeavor to hook it out; if you cannot reach it, give a good smart blow or two with the flat of the hand on the back; or on the chest, taking care to seize the little patient, and place him between your knees sidewise, and in this or some other manner compress the abdomen, otherwise the blow will be lost by the yielding of the diaphragm and the respiratory effort will not be produced. If that does not have the desired effect, tickle the throat with your finger, so as to insure immediate vomiting, and subsequent ejection of the offending substance.

The bite of a dog or cat, especially the latter, is often venomous and difficult to heal. The best thing is to first suck out the poison by means of the mouth and immediately cauterize the wound or wash the part with hartshorn, with a little water added, then apply a large hot white bread poultice to the part, and renew it every four hours. If there is much pain in the wound, foment the part, every time before applying the poultice, with a hot camomile and poppy-head fomentation. Scratches of a cat are best treated by freely smearing fresh butter on the part affected. If fresh butter is not at hand, fresh lard—lard without salt—will answer the purpose. If the pain of the scratch is intense, foment the part affected with hot water, then apply a hot white bread poultice, which should be frequently renewed.

STING OF A BEE

In case of a sting from a bee or wasp, extract the sting, if left behind, by means of a pair of forceps, or by the pressure of the hollow of a small key—a watch key will answer the purpose, wash with hartshorn and water, then the blue-bag (which is used in washing) moistened with water, should be applied to the part; or a few drops of solution of potash, or apply moist tobacco, rubbing it well in and renew from time to time. If either of these are not at hand, either honey, treacle, or fresh butter, will answer the purpose. Should there be much swelling or inflammation, foment the part with hot water, and apply a hot bread poultice

TO REMOVE FOREIGN BODIES FROM THE EAR

If a child has put either a pea, bean, bead, cherry stone, or any other smooth substance, into his ear, turn his head on one side, in order to let the ear with the pea or bead in it be undermost, then give with the flat of your hand two or three sharp, sudden slaps or boxes on the other, or uppermost, ear, and most likely the offending substance will drop out. Poking at the ear will, in the majority of cases, only send the substance further in, and make it more difficult to remove.

If an earwig, or any other living thing should get into the ear of a child, lay the child on his side, the affected ear being uppermost, and fill the ear, from a teaspoon, with sweet oil. The oil will carry the insect out of the ear, and the child is at once relieved. Dr. B. F. Kinsley, U. S. A., relates a number of cases where soldiers sleeping on the plains have come to him to have bugs removed from their ears. Accidentally he discovered that by holding a lighted candle near the ear, the insects would at once leave the cavity and come forth. The patient should be in the dark when this is done.

TO REMOVE FOREIGN BODIES FROM THE STOMACH

If a child swallows a piece of broken glass, avoid purgatives, as the free action of the bowels would be likely to force the glass into the mucous

membrane of the bowels, and thus would wound them, and might cause ulceration, and even death. The object of treatment will be to allow them to pass through the intestines well enveloped by other contents of the tube; and for the purpose a solid, farinaceous diet should be ordered, and purgatives scrupulously avoided. If a child swallows a pin, treat him as for broken glass. Give him no aperients, or it might, in action, force the pin into the bowel.

If a child swallows a coin of any kind, there is, as a rule, no danger. A dose or two or castor oil will be all that is usually necessary. The evacuations ought to be carefully examined until the coin is discovered. I once knew a child to swallow a penny piece and pass it in his stool.

TREATMENT OF A FLESH WOUND

If a child cuts his finger, there is nothing better than tying it up. Do not wash the blood away, but apply the rag at once, taking care that no foreign substance is left in the wound. If there is either glass or dirt in it, it will be necessary to bathe the cut in warm water before the bandage is applied. Some mothers use turpentine on a fresh wound. This plan is cruel and unnecessary, and frequently makes the cut difficult to heal. If it bleeds immoderately, sponge the wound freely with cold water.

TREATMENT FOR A BRUISE

If a child receives a blow, causing a bruise, immediately smear a small lump of fresh butter on the part affected, and renew it every few minutes for two or three hours; this is an old fashioned, but a very good remedy. If fresh butter is not at hand olive oil may be used, or soak a piece of brown paper in one-third of French brandy and two-thirds of water, and immediately apply; when dry, renew it. Either of these simple plans will generally prevent both swelling and disfiguration.

A Black Eye.—For a blow over the eye there is no remedy superior to fresh butter or a piece of fresh beef, or common brown paper soaked in vinegar and applied. Well anoint the parts for two or three inches around the eye, renewing it every few minutes for the space of an hour or two;

if well done the disagreeable appearance of a black eye will probably be prevented. Another capital remedy is the arnica lotion:

Take of—Tincture of Arnica, one ounce;
Water, seven ounces.

To make a lotion. Bathe the eye frequently by means of a soft piece of linen with this lotion, and between times, let a piece of linen wet with the lotion, be applied to the eye, and be fastened in its place by means of a bandage.

TREATMENT OF A STUNNED CHILD

If a child falls upon his head and is stunned, he will look deadly pale, very much as if he had fainted. In a few minutes he will in all probability regain his consciousness. Sickness frequently supervenes, which makes the case more serious, it being a proof that injury, more or less severe, has been done to the brain.

Immediately loosen his collar and tie, lay him flat on his back, sprinkle cold water upon his face, wet the scalp with cold or hot water, open the windows so as to admit plenty of fresh air.

POISONS AND THEIR ANTIDOTES

It is a frequent practice for a mother or nurse to leave external applications within the reach of a child. It is also highly improper to put a mixture and an external application on the same tray or on the same mantelpiece. Many liniments contain large quantities of opium, a teaspoonful of which would cause the death of a child. Hartshorn and oil has frequently been swallowed by children, and in several instances has caused death. Many lotions contain sugar of lead, which is also poisonous. There is not generally sufficient lead in the lotion to cause death; but there is enough to make the child very sick. All these accidents occur from carelessness.

This advice admits of no exception. If a child has swallowed a portion of a liniment which contains opium, administer a strong mustard emetic (composed of two teaspoonfuls of flour of mustard, mixed with a half a teacupful of warm water). Encourage the vomiting by afterward forcing

him to swallow warm water. Tickle the throat either with your finger or with a feather. Plunge him alternately in a hot and then in a cold bath. Dash cold water on his head and face. Throw open the windows. Walk him about in the open air. Rouse him by slapping him, by pinching him, and by shouting to him; rouse him, indeed, by every means in your power, for if you allow him to go to sleep, it will, in all probability, be the sleep that knows no waking.

When a child has swallowed hartshorn and oil, force him to drink vinegar and water, lemon-juice and water sweetened with sugar, barley water, and thin gruel. If he has swallowed a lead lotion, give him a mustard emetic, and then vinegar and water, sweetened either with honey or with sugar, to drink.

In case a child swallows either laudanum, paregoric, Godfrey's cordial, or any other preparation of opium, give, as quickly as possible, a strong mustard emetic. Mix two teaspoonfuls of flour of mustard in half a teacupful of water, and force it down his throat. If free vomiting is not induced, tickle the upper part of the throat with a feather, drench the little patient's stomach with large quantities of warm water. As soon as it can be obtained from a druggist, give the following emetic:

Take of—Sulphate of Zinc, one scruple;
Simple Syrup, one dram;
Distilled Water, seven drams.

To make a draught.

In poisoning by the poison vine or sumach, the parts may be bathed with a solution of borax or copperas, or a wash may be made by boiling elder bark in butter or milk.

When a person has been rendered insensible by poisonous gases, as carbonic acid, or sulphureted hydrogen, he should be immediately stripped, and cold water dashed over the body. The lungs should be filled with fresh air. The patient should be made to swallow dilute ammonia, or wine and brandy, or other stimulants.

In poisoning by strychnine, emetics, such as mustard, or sulphate of zinc, should be used, as well as a stomach pump.

If vomiting cannot be produced or proves useless, chloroform by inhalation should be administered.

TO MAKE A BREAD POULTICE

It is well for a mother to know how to make a white bread poultice. Scald a basin, for you can never make a good poultice unless you have perfectly boiling water, then throw in coarsely crumbled bread, and cover with a plate. When the bread has soaked up as much water as it will imbibe, drain off the remaining water, and there will be a light pulp left. Spread it a third of an inch thick on folded linen, and apply. It may be said that this poultice will be very inconvenient if there is no lard in it, for it will soon get dry; but this is the very thing you want, and it can easily be moistened by dropping warm water on it, while a greasy poultice will be moist, but not wet.

TAKING ACCOUNT OF THE PULSE

Every mother should have a general idea of what the pulse of children of different ages should be in health and in disease. Every person should know how to ascertain the state of the pulse in health; then, by comparing it with what it is when he is ailing, he may have some idea of the urgency of his case. Parents should know the healthy pulse of each child, since now and then a person is born with a peculiarly slow or fast pulse, and the very case in hand may be of such peculiarity. An infant's pulse is 140, a child of seven about 80, and from 20 to 60 years it is 70 beats a minute, declining to 60 at fourscore. At 60, if the pulse always exceeds 70, there is a disease; the machine working itself out, there is a fever or inflammation somewhere, and the body is feeding on itself, as in consumption, when the pulse is quick.

CHAPTER XXV

NURSING THE SICK

THE most important condition necessary to the maintenance of health, and the first requisite toward recovery of the sick, is perfect ventilation. A sunny exposure, an open fire, and in summer an open fireplace, are the greatest aids. Under all circumstances, keep the air pure in the sick-room. Cut flowers should not be suffered to remain any length of time; as soon as their first freshness is gone, remove them. The presence of carbon in the room, due to the wick of a lamp being turned too low, or to any cause whatever, is to be avoided as a deadly poison.

Place the bed where all danger from draughts may be avoided, and always protect the patient's eyes from the direct rays of sun or lamp light. It is of the utmost importance that all bed-linen and clothing should be changed very frequently; it should be washed and sunned thoroughly, previous to using. Sweep the floor with a damp broom to prevent dust rising, or remove dust with a damp cloth.

DESIRABLE QUALITIES IN A NURSE

A nurse should have calmness and self-possession. She should be gentle, kind, good-tempered, and obliging, but firm withal, and she should have a cheerful countenance. "Some seem by nature to have a vocation for nursing; others do not. Some have the light step, the pleasant voice, the cheering smile, the dexterous hand and the gentle touch; some are gifted in cookery for the sick, are excellent to drive away the dumps and give life and cheer to the sick room." The former good qualities are essential to a nurse, and if she can combine the latter—she will be invaluable.

She ought neither to be a tattler, nor a tale-bearer, nor a croaker, nor a putterer. A tattler is an abomination; a clacking tongue is most wearisome and injurious to the patient. A tale-bearer is to be especially

avoided; if she tells tales of her former cases, my reader may depend upon it that her turn will come. Have nothing to do with a gossip of a nurse; she is a most dangerous person to have about you.

But of all nurses to be shunned as the plague is the croaker, one that discourses of the dismal and of the dreadful cases that have occurred in her experience, many of which, in all probability, she herself was the cause of. She is a very upas tree in a house. A putterer should be banished from the lying-in room; she is a perpetual worry—a perpetual blister! She is a nurse without method, without system, and without smartness. She putters at this, and putters at that, and worries the patient beyond measure. She dreams, and drawls, and putters. It is better to have a brusque and noisy nurse than a puttering one. She ought to be either a married woman or a widow.

She must be sober, temperate and healthy, and free from deafness, and from any defect of vision. She should have a gentle manner, but yet not melancholy. She ought to have the softest step and the gentlest tone. She ought to be fond of children, and must neither mind her trouble nor being disturbed at night. She should be a light sleeper.

Scrupulous attention to cleanliness, freshness, and neatness in her own person, and toward the patient and the infant, are most important requisites.

In choosing a nurse select one who has a bright, sunshiny countenance —having nothing to do with a sour-faced individual.

WHEN TO ENGAGE A NURSE

The nurse ought to be engaged early in pregnancy, as a good nurse is caught up soon, and is full of engagements. This is most important advice. A lady frequently has to put up with an indifferent nurse from nelecting to engage her in time. The physician, at the eleventh hour, is frequenutly besought to perform an impossibility—to select a good nurse, and which he could readily have done if time had been given him to make the selection. Some of my best nurses are engaged by my patients as early as two

or three months after conception, in order to make sure of having their favorite nurses.

A nurse ought to be in the house for a week or ten days before the commencement of labor, in order that there may be neither bustle nor excitement, and no hurrying to and fro at the last moment to find her; and that she may have everything prepared, and the linen well aired for the coming event.

My reader may say, "You want a nurse to be perfection?" Well, I do; a nurse ought to be as near perfection as poor human nature will allow. None but good and true women should enter the ranks of nurses; for their responsibility is great, and their power of doing either good or evil is enormous. Hence good nurses are prizable, and should be paid most liberally.

The selection of a nurse is, for the well-being both of mother and of babe, quite as important as is the choice of a doctor; indeed, I do not know whether she is not of more importance. Mother and babe are thoroughly dependent upon her for most important services.

I hope I have said enough—I am quite sure that I have not said one word too much—on the care required in the selection of a nurse. It is impossible when such important interests are at stake, to be too particular, or to overstate its importance.

CHAPTER XXVI

DISHES FOR INVALIDS

WHEN any article of food causes increased action of the heart, quickness of the pulse, headache, or pains in the stomach, or bowels, it is then an indication that such food is injurious.

When the patient is recovering from disease, but is still weak, though gradually regaining strength, strict attention should be given to the diet. In regard to the kinds of food which may be allowed, it should be remembered that first of all, it must be light and nutritious. Milk is probably as easy of digestion as any other substance; it may be given at all times during the sickness and convalescence without injury. Ice cream in small quantities eaten slowly, is most excellent. Boiled rice is easy of digestion, and beef tea, mutton broth and chicken are useful in convalescence. Fruits are sometimes very beneficial, and at other times very hurtful. In fever, the juice of ripe oranges will be extremely grateful; the pulpy part should always be rejected. Grapes may also be allowed, being careful not to swallow the seeds or skin. Lemon juice, lemonade, strawberries which have their juice bruised out and strained, may also be allowed.

TO MAKE GRUEL

Pour a quart of hot water into a clean earthen or tin vessel over a brisk fire; when it boils, add two large tablespoonfuls of corn or oatmeal; mix it smooth in just water enough to thicken it; put a small lump of butter into the water, and when melted, add the meal and stir for about half an hour; then add a teacupful of sweet milk, and when it boils again, throw in the upper crust of hard baked bread cut into small pieces; let it boil some time, and add a little black pepper, a little salt, a pinch of grated nutmeg, a little more butter and a teaspoonful of French brandy. The butter, spices and brandy should be omitted when the case is a serious one

TOAST WATER

Toast slightly a piece of bread, and add to it boiling water; if preferred, sweeten. It may be flavored with lemon or orange peel.

BARLEY COFFEE

Roast barley until well brown, and boil a tablespoonful of it in a pint of water for five minutes; strain and add a little sugar, if desired. A nourishing drink toward the close of fever, and during convalescence.

OATMEAL COFFEE

Mix common oatmeal and water to form cake; bake and brown it, powder it, and boil in water five minutes. Good for checking obstinate vomiting, especially in cholera morbus.

MILK PORRIDGE

Two dozen raisins quartered, two cups milk, one tablespoonful flour, salt to taste. Boil raisins in water twenty minutes. Allow the water to boil away and add the milk. When it boils, add the flour rubbed to a thin paste with a little cold milk. Boil eight or ten minutes, and season with a little salt. Adding the beaten white of one egg after the porridge comes from the stove, improves it.

BARLEY GRUEL

Boil one ounce of pearl barley a few moments to cleanse it. Pour off the water, add a quart of cold water, a half teaspoonful of salt; simmer to one half, and strain. Excellent for fevers and gastric inflammation.

INDIAN MEAL GRUEL

One teaspoonful flour, two tablespoonfuls corn meal, one teaspoonful salt, one quart boiling water. Mix flour, meal, and salt, working into a thin paste with a little cold water. Stir into boiling water, and boil thirty

minutes, stirring frequently. Thin with milk or cream. Corn meal is heating, and not good where there is fever.

OATMEAL GRUEL

Two tablespoonfuls oatmeal, a pinch of salt, one quart boiling water. Boil one hour and serve with milk or cream.

FARINA GRUEL

One tablespoonful Hecker's farina, one teaspoonful salt, one cup boiling water, one of milk. Cook all together except the milk, for fifteen minutes, or until it thickens, then add the milk and boil again. Farina is a preparation of wheat and very healthful.

CRACKER GRUEL

Four tablespoonfuls powdered cracker, one cup boiling water, one cup of milk, and a little salt. Boil up once and serve fresh.

EGG GRUEL

The yolk of one egg beaten well, one teaspoonful sugar, one cup hot milk, white of egg beaten to a foam. Flavor with nutmeg or lemon. Good for cold if taken very hot before retiring.

ARROWROOT GRUEL

Add a tablespoonful of arrowroot to half a pint of boiling water; mix well, add half a pint of milk, and boil together for two or three minutes; sweeten to the taste.

PANADA NO. 1

One cup stoned raisins, one quart water, two slices toasted bread, or one cup bread crumbs, two eggs, one tablespoonful sugar. Boil the raisins one hour, skim them out, then add bread to the boiling water. Boil fifteen minutes, stirring well. Beat the eggs, adding sugar, and pour the panada over them, stirring constantly. No. 2.—Split two fresh graham crackers. Put them into a bowl, sprinkle with a little sugar and

cover with boiling water. Slip them out and serve with a little cream. No. 3.—Boil one tablespoonful cracker crumbs five minutes in one cup boiling water, slightly sweetened, and flavored with lemon or strawberry.

OATMEAL MUSH FOR INVALIDS

One cup granulated oatmeal, pinch of salt, one scant quart boiling water. Put meal and salt in a double boiler, pour over them boiling water and cook two or three hours. Remove the cover just before serving and stir slightly with a fork, allowing steam to escape. Serve with sugar and cream. Baked apples, apple sauce, and apple jelly are delicious eaten with the oatmeal. They should be eaten with the mush, the cream being poured over both mush and fruit.

INDIAN MEAL MUSH

One cup corn meal, one cup cold milk, one pint boiling water, salt to taste. Mix meal and salt with cold milk. Stir this gradually into boiling water. Cook half an hour in a double boiler, stirring often.

ENTIRE WHEAT MUSH

Mix half cup graham flour and half teaspoonful salt into thin, smooth paste, with a little cold water. Stir into one pint of boiling water, and cook twenty minutes, stirring frequently. Serve with cream. Rye mush is excellent made in the same manner, eaten also with sugar and cream.

BRAIN FOOD

Wet one cup of entire wheat flour in a little cold water and stir into one quart of salted boiling water. Cook over hot fire one to two hours. Eat hot or cold, with sugar and cream.

RICE JELLY

Two tablespoonfuls rice, one quart cold water, salt and sugar to taste. Pick over and wash the rice and cook in water one hour, or until the rice is dissolved. Add a little salt and sugar to taste. If desired for jelly, add

lemon juice and strain into a mold. When cold, serve with sugar and cream. If to be used as a drink, add more hot water, making a thin liquid, and boil longer with a half square of stick cinnamon. Strain, and serve hot or cold. Rice is good in diarrhœa and dysentery, being easily digested and assimilated.

TAPIOCA JELLY

One-fourth cup pearl tapioca, one pint cold water, one tablespoonful lemon juice, one heaping tablespoonful sugar, salt to taste. Pick over and wash the tapioca, add the cold water, and cook in a double boiler until entirely dissolved. Then add the salt, lemon juice and sugar. Turn into a mold, and when cold, serve with sugar and cream. Half cup strawberry, blackberry or raspberry jam, or currant jelly, may be used instead of lemon, without loss of quality.

IRISH MOSS JELLY

One half cup Irish moss, one pint boiling water, one lemon, one-third cup of sugar. Soak the moss in cold water until soft, pick over and wash again, then put into the boiling water and simmer until dissolved. Add lemon juice and sugar, and strain into a mold. Currant jelly, instead of lemon, is good, or four or five figs steeped with moss is excellent. The use of sea and Iceland moss is recommended in rheumatic diseases, as they contain bromine and iodine.

RESTORATIVE JELLY

One-half box gelatine, one cup port wine, one tablespoonful powdered gum arabic, two tablespoonfuls lemon juice, three tablespoonfuls sugar, two cloves. Put all these ingredients together in a glass jar and cover closely. Place the jar on a trivet in a kettle of cold water, heat slowly and the mixture will dissolve. Stir well and strain. Pour into a shallow dish and when cool, cut into small squares. Good for aged or weak persons.

GUM WATER

One ounce clean gum arabic and half an ounce of sugar, dissolved in one pint boiling water, with juice of one lemon. Add lemon juice after

other articles are dissolved, and strain all through a fine strainer. This is soothing in inflammation of the mucous membrane.

TOAST WATER NO. 2

Toast one pint of white or brown bread crusts very brown, but be careful not to burn. Pour over them one pint of cold water, and let stand for one hour. Strain, and add cream and sugar to taste.

CRUST COFFEE

Pour one pint of boiling water over two slices of brown bread, or white bread toasted. Steep ten minutes and strain. Add sugar and cream to taste.

RICE COFFEE

Brown one cup of dried sweet corn or rice; pound or grind fine. Add one pint of cold water, and steep one hour. Strain and serve with cream and sugar. These are very nice beverages for the sick, for invalids, or those in perfect health.

SLIPPERY ELM TEA

Pour one cup hot water over one teaspoonful of powdered slippery elm bark, or on a piece of the fresh bark. When cool, strain through wire strainer and flavor with very little lemon. Add a little sugar. This is soothing for inflamed mucous surfaces.

ACID FRUIT DRINKS

Pour boiling water on mashed cranberries, barberries, whortleberries or cherries. When cold, strain and sweeten as desired. No. 2.—Stir a tablespoonful of any acid jelly or fruit syrup into a tumbler of ice water. No. 3.—Dissolve one tablespoonful cream of tartar in one pint of water. Sweeten to taste.

APPLE TEA

Roast two large, sour apples, cover with boiling water. When cool, pour water off, strain and sweeten to taste.

JELLY AND ICE

Chip half a cup of ice fine. Mix with it lemon, currant, blackberry, cherry, or barberry jelly. Excellent in fevers.

TAMARIND WATER

Boil two ounces of tamarinds with four ounces of stoned raisins in three pints of water, for one hour. Strain and cool.

LEMONADE

Squeeze the juice from a lemon and add to it one tablespoonful sugar. Pour over this one cup of boiling water and cool. Drink hot after retiring, if taken for a cold.

FLAXSEED LEMONADE

Pour one quart boiling water over four tablespoonfuls of whole flaxseed, and steep three hours. Strain, sweeten to taste, and add the juice of two lemons. If too thick, add a little more water. Excellent for fevers or colds.

IRISH MOSS LEMONADE

Soak, pick over and wash one-quarter of a cup of Irish moss, and add one pint of boiling water. Heat to the boiling point, but do not allow to boil. Keep at that temperature half an hour. Strain, and squeeze into it the juice of one lemon. Sweeten to taste. Use acid phosphate if preferred.

WINE WHEY

Boil one cup of new milk, add one cup of wine. Let it stand on the back of the stove five minutes. Strain and sweeten.

HERB TEAS

Pour one cup of boiling water over a tablespoonful of the herb. Cover the bowl, set it over the teakettle and steep ten minutes. Sweeten a very little if desired. Mullein tea is good for inflammation of the lungs, camomile tea for sleeplessness, calamus and catnip teas for colds and infant's

colic. Tea made from the root of carpenter square is a specific for colic, and is also excellent for disordered liver, stomach and kidneys. Cinnamon tea is good for hemorrhages, watermelon seed and pumpkin seed tea for strangury and summer complaint.

BURDOCK ROOT TEA

Burdock is a biennial plant, sending, the first season, a straight root deep into the ground, penetrating hard clay soils, often two feet deep. These roots are the portions utilized for medicinal purposes. They should be gathered, for best results, in the fall, winter or spring, and used fresh or dried. Slice the roots into thin pieces, and pour hot water over them; place in a jar or pitcher, and keep covered till cool. Drink this tea when thirsty, instead of water. It is the best blood purifier known, being a specific for boils, carbuncles, jaundice and all ordinary skin diseases. During the spring and fall, when the system is undergoing change and so many people suffer from debilitation, it should be used as a common drink.

MEATS

The majority of mankind believe animal food to be a necessary constituent of the diet. We therefore give a few formulas for the best preparation of meats for the sick. Every particle of fat, skin and membrane must be removed.

BEEF TEA

Take a pound of lean beef, cut it fine, put it in a bottle corked tightly, and put the bottle into a kettle of warm water; the water should be allowed to boil for a considerable time; the bottle should then be removed, and the contents poured out. The tea may be salted a little, and a teaspoonful given each time.

Another way of preparing it is as follows:

Take a thick steak, broil slightly on a gridiron until the juices have started, and then squeeze thoroughly with a lemon squeezer. The juice thus extracted will be highly nutritious.

BROILED BEEF PULP

Scrape raw beef to a pulp, make into small cakes and broil as steak. Season with salt and a little cayenne pepper. Serve hot.

MUTTON BROTH

To make it quickly for an invalid, chop one pound of lean, juicy mutton very fine. Pour over it one pint of cold water, let it stand until the water is red, then heat slowly, simmering ten minutes. Strain, season, and add two tablespoonfuls of soft boiled rice, or thicken slightly with rice flour wet with cold water. Serve warm.

BARLEY SOUP

Remove the fat and bones from one pound of neck of mutton. Cut the meat into slices and add to it one tablespoonful of well washed barley, and one pint of cold water. Heat slowly, and simmer two hours. Put the bones into a cup of cold water, boil gently half an hour and strain into the meat and barley. Season with salt. Skim off the fat and serve with whole wheat wafers.

CHICKEN BROTH

Clean a small chicken, disjoint and cut the meat into half-inch pieces. Remove all fat, break or pound the bones. Dip the feet in boiling water and scald till the skin and nails peel off. The feet contain gelatine, and well cleaned may be used for jelly. Cover the meat, feet and bones with cold water, heat very slowly, and simmer till the meat is tender. Strain, and when cool, remove the fat. Season with salt, pepper, and lemon to taste, and add the white of one egg. Place over the fire, stir well, and boil five minutes. Skim, and strain through a fine napkin. If intended for jelly, pour into small cups and cool. Serve warm.

BARLEY WATER

One tablespoonful pearl barley, three cubes loaf sugar, half a lemon, one quart boiling water. Wash the barley in cold water and place it, with the sugar and lemon, in the boiling water. Let it stand covered and warm

for three hours, then strain. Currant jelly or orange juice may be used instead of lemon. Valuable for colds, strangury, diseases of bladder and urinary organs.

CHICKEN PANADA

One cup of cold roasted or boiled chicken, pounded to a paste. Add half a cup of stale bread crumbs, and enough boiling chicken liquor to make one quart. Serve hot a cup at a time.

HEALTH BREAD, MADE OF ENTIRE WHEAT FLOUR

To three pints of water add a small cake of yeast and a teaspoonful of salt. Mix with this a sufficient quantity of entire wheat flour to make a soft dough, and mould into baking pans. Let it rise about one-half as much as is usual with other bread before baking. Allowing bread to rise but once increases its nutrition. As the flour is very coarse, making the dough soft allows for swelling. Bake in a hot oven in the same manner as other bread, with the exception that it should be baked a trifle longer.

PART VI

FEMALE BEAUTY AND ACCOMPLISHMENT

CHAPTER XXVII

BATHING FOR HEALTH AND BEAUTY

THE Divine architect of our bodies has taken great precautions for the elimination of all waste of the body. One of the apparatus provided to this end is the skin, by means of which the blood is exposed to the influence of the atmosphere. The skin is one of four means the body has for eliminating impurity; the others are the lungs, kidneys and lower bowel. For the purpose of elimination, and also regulating bodily temperature the skin is provided with two and a quarter millions of little glands. The external openings are called the pores of the skin. These glands are situated in the connective tissue beneath the skin, in the shape of a coil; on the outside of the coil is a network of capillaries from which perspiration is derived. It is estimated that there are not far from three thousand of these glands to the square inch, and that they eliminate from one to five pounds of fluid in twenty-four hours. The fluid evaporates or is absorbed by the clothing; the solid impurity remains at the surface. The bath removes this impurity. If the bath is neglected the impurity becomes rancid, and more or less of it is reabsorbed into the body to create disease. Beside the impurity left through perspiration there are also the scales of dead scarf-skin and the oily matter which is secreted to preserve the texture of the skin. None can with impunity neglect the removal of all of this waste.

For a person in health, there should be a daily sponge bath, supplemented twice a week by a full warm bath with plenty of soap. This will keep the glands of the skin in activity.

GENERAL RULES FOR BATHING

All full bathing should be taken when the body is warm. In chronic cases the bath should be followed by walking, or other active exercise, if the patient's strength will admit.

Eating should not be indulged within an hour after bathing, nor should a bath be taken within two hours after eating.

The best times for bathing are on rising in the morning, at 10 a. m., at 3 p. m., and at bedtime. Every full bath should be taken quickly, the patient, if able, rubbing himself vigorously, then dressing and exercising.

Wetting the head and the chest before taking a full bath is a useful precaution, and especially for persons liable to head affections. The fact of a person being in a full perspiration is no objection to taking a bath, provided the body is not in a state of exhaustion, nor the breathing disturbed.

THE OIL BATH FOR THE SKIN

Among the most helpful, invigorating and at the same time nourishing baths, there is none that surpasses the olive oil bath. This cleanses the pores of the skin from all foreign matter. Pour a little in the palm of the hand and rub it thoroughly into the flesh, taking a part of the body at a time. After the use of the hand, produce a friction by means of a coarse towel. This is especially good for sick and thin people. Very soothing.

THE SPONGE BATH

Persons who are reduced, physically, may bathe part of the body first; as the head, face, arms, and chest, drying and rubbing with a dry towel, or the dry hand, before bathing the rest of the body. This form of sponging the body in fevers, or other acute diseases, is frequently better than exposing the whole body. It may be commenced with tepid water, gradually reducing it to cool, or cold water, as the patient is able to bear it. In acute diseases when the object is to reduce fever, water at a temperature of seventy-five or eighty-five degrees is better than colder water. The best time for taking a sponge bath is the morning, immediately after

rising from bed; sometimes a second bath may be taken before going to bed. Exercise in the open air should follow the bath. The baths may be continued for a quarter of an hour or longer, if it is desired to act as a stimulant, or to cool off the body. When a shorter time is used, it has a strengthening and exhilarating effect, and also equalizes the circulation of the blood.

THE AIR BATH

The air bath can be taken morning, evening or midday. It consists of exposing the body or any portion of the body to the air and at the same time rub the part exposed with a coarse towel until a warmth has been established throughout the system. This cleanses the pores and is especially appropriate to thin people.

THE WET SHEET PACK—KNEIPP CURE

This is a valuable process to reduce the heat of the body in fevers, and to remove unhealthy secretions. The sheet for packing should be of cotton or coarse linen, sufficiently long to reach from the patient's head to his feet, and about two yards in width, or one can use instead a coarse linen mantle. In feeble, chronic cases, it is better not to have it come quite to the ankles. The bed should be stripped of its covering, one or two pillows being left for the patient's head. One or two comfortables should be spread conveniently upon the bed and two woolen blankets upon these. If the patient is subject to coldness of the feet, he should have a jug or can of hot water, or hot bricks placed to the feet, having one or two thicknesses of the blanket between, to protect the feet from too great heat. The patient lying flat on his back should raise his arms while the assistant wraps one side of the sheet over the body and lower limbs, and tucks it closely to the body. The arms are then dropped to the side, and the other side of the sheet quickly wrapped and tucked.

The person should remain in this packing from thirty minutes to an hour and a half. If he gets comfortably warm in fifteen or twenty-minutes, thirty or forty minutes will be a sufficient length of time to remain in the pack, but if he warms more slowly, two or three hours is sufficient.

If sweating is desired, the patient should remain until perspiration appears on the forehead, generally from an hour to two or three hours. If the patient remains long enough to produce perspiration, just before it appears, he will have a chilly sensation, which will be succeeded by copious perspiration.

For very delicate persons, the sheet should be first wrung out of tepid or warm water. On coming out of the pack, the plunge, rubbing, wet sheet or towel bath may be used.

It may be used in the fever stages of remittent and intermittent fevers, and in some chronic difficulties. When the patient is very feeble, the half pack, or towel pack should be used. In the commencement of the treatment, one towel should be wet and laid across the chest and bowels, and the rest of the body enveloped in dry blankets. In a few days a second towel may be placed along the spine, and this gradually increased until he will be able to bear a full pack. Headache, muscular debility, and giddiness, indicate that the pack is continued too long.

THE VAPOR BATH

The vapor bath is excellent for colds, catarrh, pleurisy, fever, and affections of the bowels, kidneys or skin. The perspiratory glands are excited to unusual activity and bear out, at least in part, the morbific matter. There are many cabinets on the market for hot-air and vapor baths, but a home-made apparatus answers quite as well. This consists of either an alcohol lamp over which is placed a small vessel containing water or a small tub or tin pan filled with hot water and placed under the chair. In the latter case, red hot bricks or stones should occasionally be put into the vessel, so as to keep the vapor constantly rising. The time required to produce perspiration will vary from ten to twenty minutes. If the head is affected unpleasantly, producing faintings, sickness, or fullness of blood in the head, it should be stopped. The patient may be allowed to drink cold water or bathe the face with cold water, or a wet towel may be placed upon the head at the commencement. After using this bath, a full bath should be taken to cleanse the skin. Wrap the bather in blankets after

being placed on the chair for a vapor bath, but he need put on no gown or clothing of any kind.

THE CABINET BATH

This is the same in principle as the above. It requires, however, a cabinet and a small alcohol lamp. These can be procured for about $5.

THE SITZ BATH

A common wash tub will answer for this bath, although a sitz bath tub is better. The tub should be large enough to admit of the motion of the arms in rubbing, and deep enough to allow the legs to bend over each other without producing pressure, or checking the circulation. When the bath is used as a tonic, the water should be cold and the patient remain in from five to ten or fifteen minutes. Persons who are feeble should use warm water, and remain in from one to five minutes, gradually reducing the temperature until they can take a cold bath. The water should cover the hips and lower part of the abdomen. In the cold stage of intermittent fever the warm sitz-bath will very much mitigate the severity of the chill; and when followed by rubbing will often break up the attack.

In acute inflammation of the liver, stomach, bowels, spleen and kidneys, the sitz-bath should be used very frequently. At the same time, use injections of cold or warm water.

THE SHALLOW BATH

A shallow bath tub may be used, or a common wash tub. The water should be from four to six inches deep. During the bath, the abdomen and lower part of the body should be well rubbed by the patient, or by an attendant, and the head should also be sprinkled, and the back and chest rubbed. When there is no chilliness, a pail of cold water should be poured on the chest and shoulders. This bath may be employed from one to fifteen minutes by those who are very feeble and sensitive to cold, and from fifteen to thirty minutes by others. It may be followed by the dry rubbing sheet, or by hand rubbing. It will be found useful in the treat-

ment of skin diseases, sick headache, rush of blood to the head, apoplexy, paralysis, sunstroke, etc.

THE PLUNGE BATH

The plunge bath should be taken in a large reservoir or bath tub, filled with water. It may be used with advantage in all chronic diseases, which are not attended with determination of blood to the head, or difficulty of breathing, or disturbance of the circulation. The temperature of the bath should be from fifty-five to sixty-five degrees, and the person should remain in from a few seconds to two or three minutes in chronic diseases. In high fever the patient may remain in from ten to fifteen minutes.

THE FOOT BATH

This is an excellent means, especially in disease of the head and chest, and may be used also to prevent cold feet.

If the object is to determine blood from the head and chest, the vessel should not be too large, and the bath be continued from twenty minutes to an hour. If the congestion increases during the bath, cold applications should be made to the parts affected. The feet should be rubbed during and after the bath.

The warm foot bath is valuable to relieve attacks of headache, and to quiet the nervous system.

THE EYE AND EAR BATH

Forcing a small stream of hot water through a fountain syringe, is useful in some diseases of the eye and ear, especially is this true in a case of "gathered ear."

THE NOSE BATH

In catarrh, colds in the head, nose bleed, etc., this is beneficial. Water should be used by the means of a nasal douche. This should be repeated several times a day as a tonic.

WET COMPRESSES

When intended to be cooling, the cloths must be of a size suited to the part inflamed; they should then be folded six or eight times, dipped in very cold water and squeezed, and renewed every five or ten minutes, according to the degree of inflammation. If the water cannot be obtained cold, add ice to it. The bandages must be continued without intermission day and night until danger is averted. Neglect of changing the cloths will produce bad results.

When the object is to raise the temperature of the part, the bandages may consist of linen folded two or three times and dipped into cold water; they should then be well wrung out, and not changed until dry. The action may be aided by covering the bandages with a dry towel. These applications are useful in derangements of the digestive organs, liver, affections of the bowels, etc.

CHAPTER XXVIII

FEMALE BEAUTY AND ACCOMPLISHMENT

MUCH thought is employed and much expense incurred in order to preserve and improve personal appearance, and endow it with new charms. If nature has bestowed upon us good features we should be thankful and take care of ourselves; if not, remember the features are but a slight percentage of personal attractiveness. A good carriage and a kindly spirit are of the first importance.

With a little thought each day most of the imperfections of the body can be improved upon or entirely overcome. Beauty and strength of body are acquired by attention to physical needs, just as character is added to the intellect—by taking thought.

MASSAGING THE THROAT AND SHOULDERS.

Health is beauty and happiness. It is attainable by conformity to the laws of being. We are forever under the sovereignty of natural law, and only by complying with its conditions are we enabled to realize what is best in our earthly apprenticeship. It is not a tyrant but a powerful co-operator when properly understood.

Prentice Mulford, in telling how to rejuvenate the body, says: "You and generations before you, age after age, have been told it was an inevitable necessity—that it was the law and in the order of nature for all times and for all ages—that, after a certain period of life, your body must wither and become unattractive, and that even your mind must fail with increasing years. You have been told that your mind had no power to repair and recuperate your body.

"It is no more in the inevitable order of nature that human bodies should decay as they have decayed in the past, than that man should travel by stage-coach as he did years ago, or that messages should be sent only by letter as before the use of the telegraph, or that your portrait could be made only by the painter's brush as before the discovery that the sun could print an image of yourself on a sensitive surface prepared for the purpose.

"If you make a plan in thought in unseen element for yourself as helpless and decrepit, such plan will draw to you unseen thought-element, that which will make you weak, helpless and decrepit.

"If in your mind you are ever building an ideal of yourself as strong, healthy and vigorous, you are building to yourself of invisible element, that which is ever drawing to you more health, strength and vigor.

"Persistency in thinking health, in imagining or idealizing yourself as healthy, vigorous and symmetrical is the cornerstone of health and beauty. Of that which you think most, that you will be and that will you have most of."

There are always a few men and women ready to enter into the light of new possibilities. The belief that we must be old at fifty and in our graves at seventy-five, is fast becoming a thing of the past. There are those to-day who are younger and healthier at fifty than they were at fifteen, and this renewed life is possible to all who are willing to renounce their old ideas and march forward under the banner of progress.

This thought is not new, for you remember that Shakespeare said, "There is nothing either good or bad but thinking makes it so."

"Outer life must correspond to inner life, else law and sequence would be at fault, and the chain which binds cause and effect be severed." Let us place ourselves in harmony with a natural means to beautify, and thereby derive the benefits of all natural law. There are many methods for adding to external beauty, but only that is real and lasting which is made permanent by natural means. The following pages will reveal those means.

THE TRUE BASIS OF PERSONAL BEAUTY

The foundation of all personal beauty is good health. As perfect health exists only when the functions of the body can perform their part without being molested, it stands to reason that the care of the body in the manner of clothing is a most important subject and deserves our first attention.

In the more enlightened races there has recently been a great evolution in dress. This is because people are learning the law. Elasticity, warmth and lightness are the objects to be sought. From neck to toe there should be absolute freedom. It is only since woman began to awaken to her individual needs that she has declared against bands, steels, bones and stays. Healthful dress is always compatible with artistic dress. Mrs. Talbot says "That which leaves the body untrammeled is beautiful, provided the covering is for use, not for adornment only."

MASSAGING THE BODY.

The style of underclothing as well as the dress is of prime importance. We are glad to see that for daily use the union undergarment has largely replaced the drawers and chemise. For summer it is made sleeveless and of knee length; for winter it reaches from wrist to ankle. Finely woven cotton, or coarse linen, is the preferred material. Silk is not durable; wool is too warm and also irritates the flesh.

SALLOW FACES AND DEFORMED FIGURES

The small wasp waist, so admired by a few, is fast going out of style. Fashion must give way to sensible thought. Who will be foolish enough to persist in a thing that deadens the vitality, deforms the figure, spoils

the skin and takes sparkle from the eye. To repair this ravage the artist comes on the scene, but it is too late, corsets have done their work.

Madame Yale gives the following list of the corset crimes against beauty:

1. Stiff, inflexible waists with a coarsely exaggerated contour in place of slight and subtle curves.
2. Sickly, sallow complexion.
3. Pale, thin, compressed lips.
4. Red noses.
5. Lack of buoyancy, general feebleness, lassitude, apathy, and stupidity.
6. Distorted features.
7. Soured tempers.
8. Wrinkles.
9. Lustreless eyes.
10. Ugly shoulders.
11. Ugly bust.
12. Clumsiness. (Corsets render any woman more or less inelegant and ungraceful in her movements. Her imprisoned waist with its flabby, unused muscles has no chance of performing beautiful undulating movements.)

Stays do not strengthen the body; on the contrary, they weaken it. The pressure upon the muscles causes them to waste, so that in the end, a girl cannot do without them. The stays are then obliged to perform the duty of the wasted muscles. They weaken the lungs by interfering with their functions. Every inspiration is accompanied by a movement of the ribs. If this movement is impeded, the functions of the lungs are impeded likewise, and, consequently, disease is likely to follow, and either difficulty of breathing, cough or consumption may ensue. They weaken the heart's action, and thus frequently produce palpitation, and eventually organic or incurable disease of the heart. They weaken the digestion by pushing down the stomach and liver, and by compressing the latter, and thus induce indigestion, flatulence and liver disease. They weaken the

bowels by impeding their peristaltic motion, and thus produce either constipation or rupture.

THE ELIXIRS OF LIFE

In disease, rest and pure air is half the cure; indeed, some forms of disease are cured by rest and deep breathing alone. Almost any form of indigestion, or headache, will yield if that system is allowed proper rest and plenty of good heavenly air. One may, with advantage, fast from one meal up to three, four, or seven days. This time allows the system to rid itself of whatever is clogging it, at the same time giving an overworked digestion rest.

The sleep of all persons should be calm, without pain, uneasiness or dreams. It should be neither interrupted nor too long undisturbed. The more noiseless the breathing the more healthy. The better position to assume on retiring is to lie upon the right side. If there is food in the stomach it passes out the more readily. The pillow should be just enough to allow the body a horizontal position when lying on the side. The mattress may be of straw, husks, hair or wool, but not feathers. The covering should combine warmth with lightness. Absolute cleanliness in regard to beds is the most essential requirement

THINK JOY, LOVE, PEACE

The following mental treatment, recommended by Charles Fillmore, is guaranteed to cure every ill that flesh is heir to: "Sit for half an hour every night at 9 o'clock and mentally forgive every one against whom you have any ill-will or antipathy. If you fear or are prejudiced against even an animal, mentally ask forgiveness of it and send it thoughts of love. If you have accused any one of injustice, or talked about them unkindly, or criticised them, or gossiped about them, withdraw your words by asking them in the silence to forgive you. If you have had a falling out with friends or relatives, are at law or engaged in contention with any one, write letters of forgiveness and withdraw all proceedings that will tend to prolong the separation. See everybody and everything as they really are, Pure

Spirit, and send them your strongest thoughts of love. Do not go to bed any night feeling that you have an enemy in the world.

"Be careful not to think a single thought or say a word that will offend. Be patient, loving and kind under all circumstances. You can do this if you are faithful to the Silent Hour, because there you will be helped to overcome selfishness.

"Self-condemnation is also a great error and leads to dire results. If you have accused yourself of ignorance, foolishness, fear, sickness, anxiety, poverty, anger, jealousy, stinginess, ambition or weakness or if you are melancholy and indulge in the 'blues' ask forgiveness for each of the loving Father."

A CURE FOR CORPULENCY

Very corpulent people are neither strong nor vigorous, and an excess of this kind should be treated as an abnormal condition. Causes.—Excess of sweets, fine flour, sugar, potatoes, pastry, fats, or creams. Treatment.—Hot baths of all kinds, exercise, moderation in eating, friction over the entire body with a bath brush, very deep breathing a few minutes, three to four times a day. Diet.—Bread made from the entire wheat flour; beef, mutton, all kinds of fish, oysters, raw or cooked, without flour; poultry, all kinds, but not thickened with flour; lettuce, onions, asparagus, cold slaw, celery, string beans, sour apples, peaches, strawberries without cream or sugar, coffee and tea in moderation. Eat slowly, in moderate quantities, and take as little liquid as possible at meals. Bathe every night with cold water. The bowels will regulate themselves after this diet has been adhered to for a few days. Use injections to clear the rectum of fæces until a natural movement has been restored.

OSTEOPATHIC TREATMENT TO REDUCE FLESH.

CAUSE AND CURE OF LEAN AND NERVOUS PEOPLE

Causes.—Excess of sweets, acids, spices, fine flour, pastry, mental worry, or weak digestion. Thin people having weak digestion are often kept so by the same food which causes others to be corpulent. If the starch, butter and fine flour cannot be digested, the system is kept in a feverish, dyspeptic state, and nervousness or consumption result for no other reason than that life is burned out by a diet which only produces heat and does not renew the tissues. Treatment.—Attend well to cleanliness, so as to eliminate all impure secretions that tend to the surface. This aids in purifying the blood and strengthening the muscles. Hot baths are best, such as are directed for corpulency, except that a thin person should use oils very often after a hot bath, rubbing well into the skin, with a piece of flannel or Turkish bath towel, until the skin is dry and soft. This induces a feeling of strength and health. Practice the deep breathing two or three minutes from three to four times daily. Breathing too long or too often would over-stimulate the brain, produce dizziness, and sometimes headache.

Diet.—For lean and nervous people, bread made from the entire wheat flour, cream, butter, milk, graham mush, oatmeal mush with cream or sugar, soups of all kinds, eaten hot at the beginning of a meal, and seasoned with plenty of celery, onions or parsley; light puddings, farina, rice, tapioca, corn starch, with cream or sugar, and fruits of all kinds with little sugar. Much sugar in a weak stomach is usually converted to lactic acid, creating acidity and heartburn, causing too much acid in the system, consequently leanness and nervousness. All liquids except soup should be taken between meals. Drink plenty of good water without ice. Vegetables, baked potatoes, boiled spinach, peas, beans, lettuce, cabbage, boiled celery, onions, meats of all kinds, chicken, oysters, fish, eggs, and lobsters. Tea and coffee sparingly.

HOW TO PREVENT WRINKLES

The object of a skin food is to prevent wrinkles which mar the smoothness and beauty of ever so nice a complexion. Mme. Qui Vive calls them

"unnecessary evils—anyway until one gets to be a hundred or so." They appear because the subcutaneous fat has been absorbed, and the skin falls into folds. When the skin food or olive oil is applied the fattening qualities are nourished and they in turn build up the underlying tissues.

TREATMENT TO PREVENT WRINKLES.

Mme. Pote says not even worry will make a woman grow wrinkled and old so rapidly as sleeping with the head upon high pillows. The tendency of the muscles through the day is to droop; this can be counteracted by sleeping on a low pillow. The facial massage should consist mainly of upward pressure.

FACIAL ERUPTIONS—HOW CURED

Facial eruptions are largely due to internal impurity, but are sometimes caused by disease or by an irritating soap, or use of powder. Where the face is washed and cleaned more than the rest of the body the impurities are called to where escape is most freely offered. When it is made unsightly by blotches, attention must be given to the diet, to the internal bath, and other hygienic measures. All pastries and confections must be given up. Feast on fruits and nuts instead of candies; eat apples, oranges, lemons, grapes, etc. Pimples or blotches must never be irritated; keep the skin clean, the skin food applied, and let the cure come from bathing and purifying through fresh air and pure food.

PIMPLES ON THE FACE—HOW CURED

Hard red pimples are a common and an obstinate affection of the skin, affecting the forehead, temples, the nose, chin, and cheeks; occasionally attacking the neck, shoulders, back, and chest. As they more frequently affect the young, and are disfiguring, they cause much annoyance. I find, in these cases, great benefit from bathing the face, night and morning,

with strong salt and water—a tablespoonful of table salt to a teacupful of water; paying attention to the bowels; living on plain, wholesome, nourishing food, and taking a great deal of outdoor exercise. Sea bathing is often very beneficial. Grubs and worms have a mortal antipathy to salt.

Blackheads require much the same treatment. They are due to inactivity of the sebaceous glands and hence disappear when activity becomes a form of treatment.

Do not bathe the face with soap and water before going out without fortifying it with some preparation, such as the following:

Take of—Distilled witch hazel, three ounces.
Prepared cucumber juice, three ounces.
Rosewater, one and one-half ounce.
Essence white rose, one and one-half ounces.
Tincture of benzoin, one-half ounce.

After using a little of the above a powder may be dusted lightly over the face.

Sunburn is a burn and should be treated as such. Treat with a cold cream rubbed well into the skin.

BEAUTY AND EXPRESSION OF THE EYES

The eyes, of all the features, stand pre-eminent for their beauty and expression. They are the windows of the soul. They alone "reveal the internal thought of the mind." Melting with sadness, or sparkling with joy, or glowing with love, they impart to the countenance those real fascinations which are the attributes of man and man alone.

An eye is beautiful when it is full, clear and brilliant, corresponding in color with the complexion, especially so if the eyelids, eyelashes and eyebrows, which, with it, are also beautiful, and in keeping with it.

The care of the eyes consists chiefly in daily bathing or washing them with pure water.

To face the light when reading or writing, to sew or embroider in a flickering artificial light, to read lying abed, are a few of the things to be

avoided if sight is to be preserved. Whenever the eyeballs ache, work of whatever nature should be suspended and the eyelids closed for a moment's rest. Another thing, do not cry. There have been many dramatic things written about women who are sad-eyed, but the fashion has passed. Weeping inflames and injures the eyes.

When the eyes sting and burn, bathe in tepid water and rest them for a time. Dr. Foote says that John Quincy Adams preserved the perfectness of his sight until he died at the age of eighty-one, by pursuing, from an early age, the habit of frequently bathing the eyes and making gentle manipulations toward the bridge of the nose.

Where there are visual disturbances they may be corrected by properly fitted glasses.

Impure and strong soap should be avoided, and only a soft towel should be used in wiping them. The use of a coarse towel is very injurious, as it tends to flatten the eye and hastens the arrival of the time when the assistance of spectacles becomes necessary.

BRILLIANCY OF THE EYES

To relieve the eyes when fatigued or weak, itchy or inflamed, and to remove scales, discharges, etc., nothing is equal to frequently bathing them with water, at first tepid, but gradually lowered in temperature to absolute coldness. If cold water does not have the desired effect the use of Pond's Extract will doubtless prove beneficial.

To increase the beauty and expression of the eyes by artificial means is highly objectionable and even dangerous. Some fashionable women and actresses, to enhance the brilliancy of the eye before appearing in public, frequently expose them to air slightly impregnated with the vapor of prussic acid. This is done by placing a drop of the acid diluted in water at the bottom of an eye-cup, and then holding it to the eye for a few seconds.

Others moisten the brows over the eyes with a few drops of tincture of belladonna. This dilates the pupil, giving a peculiar fulness and an

expression of languor to the eyes, which, by some, is regaded as captivating.

The use of these medicines, in this way, is extremely injurious, resulting in impaired vision.

BEAUTIFYING THE EYEBROWS

The eyebrows should never be cut or shaved. Their beauty consists in their being full, smooth, glossy, and well-defined. They should have little breadth vertically, but extend in a graceful, arched line well over the eyes. In cutting they grow coarse.

After washing the face, the fingers or brush should be passed over the eyebrows to smooth and set the hairs in place. Some women, when making their toilet, pass the finger, very slightly moistened with pomade, or a burnt match, over the eyebrows, to darken and give them gloss. The practice is not to be recommended. A prominent gray hair in the eyebrows may be plucked out, but not cut off.

BEAUTIFUL TEETH—HOW POSSIBLE.

The care of the teeth is of the utmost importance. Besides the personal appearance, it is highly necessary to health, on account of their use in preparing the food for the process of digestion, that they have the utmost attention. Even those who are most attentive to their teeth, and who highly value their beauty, direct their main efforts to the care of the front teeth, because these are seen when speaking, smiling or eating. Yet the preservation of the teeth and their permanent beauty are nearly one and the same. The management of the teeth consists in thorough cleanliness and the avoidance of those things that exert an injurious action on them. Among the substances to be avoided are acid piquant sauces, pickles, or anything containing vinegar. Also medicines containing acids or acid-salts, or any salt in which a strong acid is used should be avoided.

The teeth should be examined at least once every year by a dentist and all decayed spots removed and filled.

THE CARE OF THE TEETH

Cannot begin too early; throughout life they are necessary adjuncts to health as well as beauty. When the infant teeth come they should be washed every morning with warm, clean water. Should a dark-colored formation appear next the gum it may be removed by rubbing prepared chalk over the discoloration. If it cannot be reached by the soft cloth use a toothpick bitten into pulp. If the milk-teeth are not cared for, the permanent teeth are apt to come in irregularly and be a lasting deformity. By the time a child is three years old he can be taught to use his brush himself, moving up and down rather than from side to side.

Teeth are apt to become diseased from insufficient or improper nourishment as well as a lack of cleanliness. But this tells in all parts of the body.

Cleansings of the teeth should be after each meal, and upon retiring. Use a mild tooth-powder (Lyon's is good), rinsing the mouth as well as the brush, thereafter. Tepid water should be used, as excessive cold or heat destroys the enamel.

When making the morning toilet the mouth may be rinsed with water in which there is a drop of listerine or carbolic acid; it prevents tenderness of the gums. Occasionally a little juice from a lemon may be squeezed over the brush and rubbed over the teeth, to remove the yellowish deposit; it must be used quickly and the mouth rinsed as it may damage the enamel. It must be borne in mind that the enamel, Nature's protection for the teeth, when once destroyed is never formed anew. Hard substances that break or scratch it should never come in contact with the teeth. A splendid strengthener and beautifier to the teeth of children and young folks is that known as "Ostine." If not found in your drug store, address the "Ostine Company," Masonic Temple, Chicago, and a pamphlet will be sent you with price. Never bite threads, or crack nuts with the teeth.

BEAUTIFUL HANDS

While it may seem a little out of place to treat the hands when speaking of the features of the face, yet our space is so limited that unless we

do, we fear it will be crowded out altogether. The hands—their shape, contour and texture—is a large subject and deserves more than a passing notice, but a word as to their care will, we hope, prove helpful.

After bathing the hands, the skin should be pushed back from the nails to prevent hang-nails. Nails should be trimmed the same shape as the finger. Use no sharp instrument about the nails except the scissors for trimming. Rub callous spots with pumice stone.

Redness of the hands is due to restriction of the circulation. Either the sleeves, corset, or waist, is too tight. Lemon juice will whiten the hands; apply cold cream immediately after using it. Protect the hands from cold; it is destructive to their beauty.

FOR CHAPPED HANDS

Tie a teacupful of bran in a muslin bag, and put over night into a large water can or jug of rain water. Use this water to wash with on the following morning, and every morning until the chaps are cured. As often as water is withdrawn from the water can or jug, refill with fresh rain water, in order that the bran may be constantly soaking in it. The bran in the bag should be renewed about twice a week.

Take particular care to dry the skin well every time it is washed; then, as well as every night at bedtime, rub a piece of deer's suet over the parts affected; a few dressings will perform a cure. The deer's suet may be bought at any of the shops where venison is sold. Another excellent remedy is glycerine, which should be smeared, by means of the finger or a camel's hair brush two or three times a day on the parts affected.

CHAPTER XXIX

IDEAL FACE AND FEATURES

Her eyes, her lips, her cheeks, her shape, her features,
Seem to be drawn by love's own hand; by love
Himself in love. —Dryden.

THE beauty of the human face depends on the regularity of features and the manner in which we make the most of our God-given attributes. A high forehead is always to be admired, but if we don't possess it, then let us learn to so dress the head as to make what we have show to advantage. Perhaps most important and that which needs our closest care and watch is the complexion.

Madame Yale, the beauty specialist, says of the facial expression, "Our feelings are portrayed very accurately on the surface of the face and are telegraphed silently to all who behold it. Consequently there is no way of disguising the real cause of a bad expression."

There may be lotions for the complexion and tonics for the hair, but unless the inner woman be under cultivation also, the veneer will not avail for long. If one should be under a hereditary cloud of ill-nature so that it is not natural to look for the bright side, it can be dispersed by cultivating cheerfulness and amiability until the habit becomes established. To this end it will be of great assistance to practice Mrs. Talbot's Joy Lesson; which is, to go to your room and lock the door; sit down by your bed, and repeat the word Joy aloud. Exclude all other thoughts; and, after the mind becomes fixed strongly enough to attract the thought-element of gladness, ill-nature, or "the blues," will be banished as darkness fades before an influx of light.

IDEAL SKIN AND COMPLEXION

Every individual knows what the skin is so far as its external appearance goes, but there are many who are probably not aware of its wonderful construction and uses. It not merely acts as an organ of sense and a

protection to the surface of the body, but it clothes it in a garment of the most delicate texture.

The skin is very sensitive, and while it possesses the softness of velvet and the hues of the lily and rose, it nevertheless possesses strength and power of resisting external injury, and is not only capable of repairing, but of actually renewing itself. It is not protected with hair, wool, or with feathers, as with the brute creation, yet the human skin is furnished with innumerable nerves, which make it extremely susceptible to all climates. Instinct teaches us to provide clothing, to shield it from the glaring rays of the sun and the cold of winter.

LAYERS OF SKIN—HOW FORMED

The skin, though in appearance a single membrane, is composed of three distinct membranes, each of which has special duties to perform. The exterior or cuticle is the one which immediately meets the eye. It is of uneven thickness. Some parts are extremely thin and delicate, and others thicker and harder.

It is devoid of feeling, and thus well fulfills its office as a protective covering of the body. Throughout its surface it consists of minute pores, which permit the escape of the perspiration. Its renewals are carried on at its under surface, while its damaged, worn-out and useless portions are thrown off in the form of scales.

Under the cuticle, and resting on the cutis, is the mucous network. This is a thin layer of soft, pulpy matter, of a fibrous character and appears to be the seat of the color of the skin.

Beneath the mucous network, and forming the third, last in succession inwards, and principal tegumentary covering of the body, is the true skin. It is highly sensitive and of a very complex structure. It is fibrous and of a whitish color. It is very thickly supplied with absorbent and excretory vessels, with arteries, veins, and nerves.

SKIN STRUCTURE—HOW TO PERFECT

The minute capillaries of the arteries spread themselves out and are thus able to exhale the peculiar secretion which we call perspiration: here

the so-called roots of the hair originate and find nourishment; and here all the functions of the skin are performed. It is this portion of the body that gives the relative thickness to the whole skin.

Thus the general structure of the human skin is absolutely perfect. It combines within itself the organ of sense, of excretion, secretion, respiration and nutrition. The life of its functions is not only highly conducive to health, but is absolutely essential to its perfect enjoyment, to both physical and mental vigor, and to beauty. This then surely deserves our serious attention.

In perfect health, the management of the skin is very simple, and consists of habitual cleanliness by daily personal ablution. To preserve the softness of its texture, and the delicacy of its hues, it is necessary to protect it, as much as possible, from external influences and all external accidents capable of injuriously affecting it.

Exposures to the extremes of heat and cold, and sudden changes of temperature, tend to destroy its natural sensibility, to thicken and harden it, to render it coarse and rough. It imparts to it also a streaky, ruddy, weather-beaten appearance. Drying winds, whether hot or cold, also prove injurious, as they carry off the moisture which is essential to its proper action.

HOW SUNLIGHT AFFECTS THE COMPLEXION

On the other hand, continual exposure to a moist atmosphere, or humidity tends to relax it and remove its impurities. Light and shade also affect the skin. Sun baths for some little time each day are favorable to health and beauty of the skin, and improve the color of the complexion; but the direct rays of hot sun, particularly the summer, when long continued, thicken and darken it.

An insufficient exposure to light, on the contrary, causes the skin to assume a pale and sickly hue, and to become lax and unhealthy. To overcome the ill effect of external influences the dry skin, after ablution or bathing, may be slightly anointed with some mild oil, like the pure olive oil and any vegetable oil. Friction should at the same time be employed

by means of the fingers, and the whole surface subsequently gently wiped with a napkin or towel. Glycerine may also be used instead of oil. By diluting this with five or six times its bulk of soft water we have a lotion which is not only capable of imparting delicacy and an agreeable sensation to the skin, but also of preserving it, to a very great extent, from the effects of drying winds.

Pure food, pure water and pure air in addition to the above suggested care will do wonders for a good complexion. To keep the skin in good condition the body must be kept cleansed of impurity from its millions of perspiratory pores.

AIR BATHS BENEFICIAL TO THE SKIN

Stimulating the little nerves that lie upon the surface of the body tends to stimulate the healthy action of the skin, the circulation of the blood, and, finally the operations of all the organs. To do this successfully completely disrobe, go into a room filled with fresh air, and rub down. This is particularly gratifying after a long day of hard work or shopping or visiting. If you feel nervous or irritable try this simple method of opening the pores. It will make you doubt if you were in a bad humor after all, so pleasing will be the change.

LOTIONS

In bathing the face, be careful not to be rough in application of soap and towel. From exposure to the air and dust the face and hands need extra care. Use warm, soft water, lather the face and hands with a good soap, and then massage every portion of the face and neck until the flesh tingles; after which rinse, and dry by patting the skin with a soft towel. Apply then the following skin food:

Spermaceti, one-half ounce.
White wax, one-half ounce.
Sweet almond oil, two ounces.
Lanoline, one ounce.
Cocoanut oil, one ounce.
Tincture benzoin, three drops.
Orange flower water, one ounce.

A GREAT BEAUTIFIER

There are few things more conducive to health than walking exercise. Walking—I mean a walk, not a stroll—is a glorious exercise; it expands the chest and throws back the shoulders; it strengthens the muscles; it promotes digestion; it tends to open the bowels, and is better than any aperient pill ever invented; it clears the complexion, giving roses to the cheeks and brilliancy to the eye, and, in point of fact, is one of the greatest beautifiers in the world.

The early morning is the most desirable time for a walk. The dews of evening are frequently dangerous, giving colds, fevers, and other diseases.

Do you desire to be strong? Then take exercise. Do you hope to retain your bloom and youthful appearance and still look charming in the eyes of your husband? Then take exercise. Do you wish to banish nervousness and low spirits? Then take exercise. There is nothing standing still in nature; if it were, creation would languish and die. There is a perpetual motion. And so must we be constantly employed, if we are to be healthy and strong. Nature will not be trifled with; these are her laws—immutable and unchangeable, and we cannot infringe them with impunity.

CHAPTER XXX

THE HAIR—ITS BEAUTY AND PRESERVATION

IF THERE be one subject more than another in which the tastes of people appear to agree, it is that glossy, luxuriant hair is not only an adjunct to beauty, but essential to the highest development of the personal charms. Among the Orients, and the Romans, as in all time since, the care, arrangement and decoration of the hair formed next to the bath the leading portion of their toilet.

Every woman should adopt a style of dressing the hair becoming to herself and cling fondly to it. Each passing whim of fashion cannot improve the appearance of everybody.

Oily hair should be washed twice a month in country places—once a week in cities, and thoroughly rinsed. Hair not so oily, about once in a month. The hair should also be trimmed once a month. When the nourishment within each hair does not extend the full length it splits. The trimming of the ends is to remove these dead portions, thus promoting growth. When the hair begins falling, the scalp may be invigorated by massage treatments. It quickens the circulation and brings health and strength to the roots.

TONICS FOR THE HAIR

The best application for the hair is cold water and two good hair brushes. Avoid oil and pomatum. There is a natural oil of the hair, which is far superior to any other oil. The best way to wash the hair is to make a strong shampoo of Green's soap, pure Castile soap, Woodbury's tar soap, and Pear's soap. Wet the hair thoroughly with hot water, then apply the shampoo. Rub thoroughly, rinse with hot water, then cold. Rub till dry. The best daily beautifier of the hair is a downright thorough good brushing with two good hair brushes.

Brushing the hair at night removes accumulations of dust. Dandruff is a natural formation and will accumulate if cleanliness is not observed.

The following remedy is good for dandruff and falling hair:

Bay rum, one pint.

Soft water, one pint.

Salt, one teaspoon.

Put in bottle, shake before using. Apply directly to the scalp each night, rubbing it well in.

When bodily health is not good it is to be seen in the hair. Any of the symptoms should suggest attention to health.

GRAY HAIR—HOW PREVENTED

It may be laid down as a law, to which there are no exceptions, that the vigor, luxuriance, and beauty of the hair uniformly correspond to the state of health of the scalp from which it grows. While the scalp is soft and thick, and the blood circulates vigorously there is then no danger of decay. If the health is impaired soon after the middle age, and frequently even before it, gray hairs begin to appear. At first they are few in number, but time soon multiplies them, and in a few years they become sufficiently numerous to affect the general color of the hair.

Among other causes besides the health may be mentioned the use of improper cosmetics, anxiety, irregular habits, use of tobacco, want of fresh air and exercise and keeping the head unhealthily hot and close. It may be observed also that whatever proves injurious to the skin also proves injurious to the hair-bulbs imbedded in it, and consequently to the hair itself.

BALDNESS

Baldness arises from the reduced energy of the circulation in the vessels of the scalp, until it becomes too poor for their due nutrition and support. In such cases it will be found that the scalp now covers a larger portion of the skull than it previously did when vigorous; and that its sides have somewhat receded from the top of the head, so that the balance

of the remaining hairs descend lower on the forehead and the sides and back of the neck, than formerly.

When the hair ceases to grow, and falls off in large quantities without being replaced by new growths, the approach of baldness may be anticipated. Now is the time to begin treatment. If promptly and skilfully carried out the progress of decay may be arrested.

The treatment should consist of frequent frictions with the hair-brush and the daily ablutions in cold water. A cold shower-bath taken on rising in the morning is also good.

CHAPTER XXXI

GRACEFUL DEVELOPMENT OF THE BODY

A HEALTHY mind in a healthy body was the Grecian ideal, which, so long as that ideal adhered, caused Greece to lead the world. But Greece had not fully discovered the law. She worked from the outside; whereas the law means first the healthy mind.

Breath is the first need of a healthy life. The babe's first cry is his physical need for air. Respiration introduces oxygen, a food, into the lungs, and by the diffusion of gases leaves some of it with the old air in the lobules and carries away carbonic acid gas—a waste and poisonous product.

Oxygen is the most abundant and the most important of all the elements. Almost all of the chemical changes in the body are between the oxygen of the air and the carbon and hydrogen of the food. When deprived of pure air the body is injured as much as when deprived of pure food—though in a different manner.

The body needs, in pounds, three times as much air as it does food and drink combined; yet so accustomed are people to eat and drink, and to breathe scantily, that the body is filled with disease and impurity. Morbid lungs mean morbid conditions in every function of the body.

It is very desirable that every person should go through a regular breathing exercise each day. They should be made to stand upright, throw back the shoulders, and alternately and regularly fully fill and fully empty the lungs of air. If this plan were daily followed, devoting fifteen or twenty minutes to the exercise, the chest and lungs would be wonderfully invigorated, and the whole body benefited.

EASE AND GRACE

In middle life and even in old age suppleness of the body may be preserved by attention to certain needs of the body. One writer says,

"Exercise all your life. When you stop exercising and become indolent, you begin to die. Nature has willed it so." To preserve equilibrium it is necessary to take exercise enough every day to cause free perspiration and fatigue. If the daily employment is of a physical nature there should yet be enough other muscular exertion to secure an all-around development of the body. For adults physical activity must not be violent nor too prolonged, although the muscles may be firmer than in youth.

BREATHING EXERCISES FOR THE FIGURE

A teacher of the principles elaborated by Francois Del Sarte says: "Aside from a proper diet there is nothing that will bring self-control so readily as breathing exercises." Following are the two most highly recommended:

Exercise No. 1.—Stand erect, with abdomen well out of sight, arms bent to level of shoulders and finger-tips upon the chest. Now look up and inhale breath while sweeping the arms and hands up, back and down to sides; exhale while sweeping hands to chest again by the heart-shaped circle. Repeat six times.

Exercise No. 2.—Stand erect, expand chest and draw abdomen out of sight; throw head back and face up, the arms at the sides; raise as you inhale until the finger tips reach at the top of head. Hold breath a few seconds and exhale through nostrils, dropping hands gradually to side.

Health being absolutely dependent upon the breathing powers, there is no phase of life in which chest cultivation should be neglected. Well-developed shoulders and chest always indicate fine, strong individual powers.

A good breathing exercise for use on awakening in the morning is the following: Stand erect, heels together, hands on hips, chest up; inhale slowly through the nostrils until the lungs are full, then expel all the air, forcing it out as much as possible. Continue five times each morning. There will be a dizziness at first, because the system has not been used to so much oxygen, and it has an intoxicating effect; but this passes away with practice.

When walking in the open air it is beneficial to try the following lung gymnastic: Inhale slowly, then walk five or ten steps, and exhale slowly. Any person who is a member of a family with tendencies to diseases of the air-passage will be able to hold at bay the scourge of asthma, bronchitis and consumption by this exercise.

PHYSICAL CULTURE

Games, such as rowing, skating, lawn tennis, hand ball, boxing, fencing, polo, curling, quoits, foot-ball, golf, base ball, basket ball, bowling, and all gymnastic exercises are very beneficial. Such games bring the muscles into proper action and thus cause them to be fully developed. They expand and strengthen the chest; they cause a due circulation of the blood, making it bound merrily through the bloodvessels, and thus diffuse health and happiness in its course. If games were more patronized in youth, so many miserable, nervous, useless creatures would not abound. Unfortunately, in this enlightened age, we commence at the wrong end—we put the cart before the horse—we begin by cultivating the mind, and we leave the body to be taken care of afterward. The two are inseparable. They should be trained together.

Horseback riding, running and walking are also splendid exercises. Swimming is a glorious exercise—one of the best that can be taken; it expands the chest; promotes digestion; develops the muscles, and brings into action some muscles that by any other form of exercise are but seldom brought into play; it strengthens and braces the whole frame, and thus makes the swimmer resist the liability of catching cold; it gives both boys and girls courage, energy, and self-reliance, splendid qualities in this rough world of ours. It is a fine exercise for those who are inclined to be round-shouldered.

ROUND SHOULDERS—HOW OVERCOME

One ought never to be allowed to stoop; stooping spoils the figure, weakens the chest, and interferes with the digestion. Horseback riding and swimming are very beneficial. One should live on good nourishing

diet, and not be too closely confined to the house or lessons. Stooping, if neglected, is very apt to lead to consumption.

If a boy is round shouldered, let him be drilled; there is nothing more likely to benefit him than drilling. You never see a soldier round-shouldered or slouchy in his gait. He walks every inch a man. Look at the difference in appearance between a country boy and a soldier. It is the drilling that makes the difference.

PERSONAL HOME REMEDIES.

Between the last chapter on "Graceful Development of the Body," and the next chapter, entitled "The Doctor in the Home," the publishers have, at the request of friends, added a few blank pages for the use of patrons who have had at various times simple remedies given them and which after trial have been found most efficacious. These blank pages offer a means of preserving same.

PART VII

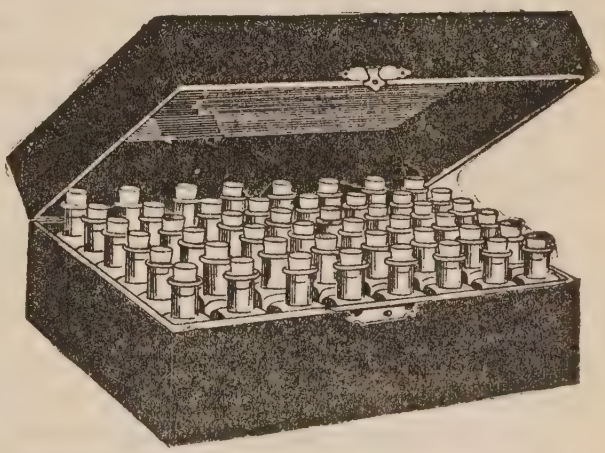
THE DOCTOR IN THE HOME

CHAPTER XXXII

HOME REMEDIES AND HOW TO USE THEM

AT THE urgent request of many friends and to meet the growing demand of the multitude of mothers who believe in administering at home the milder remedies of homeopathy, the following pages have been added. Space will not permit an exhaustive description of all the medicines and the treatment of all the diseases to which mankind is subject, but the object has been to select such as may be treated with comparative safety by any intelligent mother. The treatments given here are recommended by the most advanced physicians of the homeopathic school, and the remedies advised those that can be most easily obtained.

It has become quite the thing in many homes to keep on hand a medicine chest with some forty remedies to use in case a slight ailment attacks any member of the family. This method is far cheaper than calling in a physician each time that Johnnie has a fever. Besides, its quick use has another advantage—oft-



ALL CHESTS CONTAIN LOCK AND KEY.

entime, in the night, for instance, a disease can be arrested, while if one

waits till morning to summon the doctor, the disease is apt to get so firm a hold of the patient as to make it difficult to check.

If a chest as suggested here cannot be procured of one's own druggist, by writing Boericke and Tafél's, Homeopathic Pharmacists, Chicago, Illinois, or Philadelphia, Pa., a catalogue will be mailed. With this catalogue in hand one can readily decide what to procure. A $5.00 chest is plenty large for ordinary families, as the bottles can be refilled when exhausted.

DELAYED AND OBSTRUCTED MENSTRUATION

An excellent prescription, recommended by Prof. Cooke, of Hahnemann Medical College, Chicago, is as follows: About two weeks before the period, take a dose of Gelsemium every day at night, and a dose of Belladonna in the morning. At the time for the menses, if there is much pain, take these two remedies alternately every two or four hours.

Pulsatilla—If the patient is melancholy and sad, and inclined to weep; paleness with flashes of heat; loss of appetite, with desire for acids; nausea and vomiting.

Bryonia—If there is congestion of the head; flushed face, frequent nose bleeding, constipation; palpitation of the heart.

Lycopodium is suitable for similar symptoms.

Phosphorus—If the patient is predisposed to lung disease, weak chest, cough, pain in chest, spitting of blood.

Arsenicum—If she has dropsical swellings about the eyes, or of the feet or limbs, pale complexion, chlorotic.

Sulphur—If the preceding remedies fail.

Administration of Remedies—Give a dose (six globules) every morning of either of the above remedies for a week or ten days. If better, discontinue four days, and give sulphur every morning for a week.

It is well for the patient, a few days before the period, to take a warm hip or foot bath twice a day, and at night when retiring to apply cloths wet in warm water to the lower part of the abdomen.

SUPPRESSION OF THE MENSES

Aconite—When the suppression is caused by fright or cold, with congestion of blood to the head and chest, redness of the face, nausea, faintness, giddiness, this may be given in alternation with Bryonia. If these remedies afford only partial relief, give Opium.

Belladonna—For patients of full and robust habit. Symptoms are beating headache, redness of the face, congestion of the head or chest, great thirst.

Bryonia—Headache and giddiness, aggravated by stooping and motion; pain in stomach, sour belchings, constipation, bleeding of the nose.

Pulsatilla—The most important remedy in this trouble. Called for when the suppression is occasioned by getting cold; severe headache, confined to one side of the head, with shooting pains, extending to face, ears and teeth; dizziness, with humming in the ears; palpitation of the heart; coldness of the hands and feet; flushes of heat; nausea and vomiting; pressure in the lower part of abdomen; feeling of suffocation on the least exertion; frequent desire to urinate, leucorrhœa; sadness.

Sepia—Nervous headache, with alternate shuddering and heat; colic, and pains in sides; bearing down pains, pale complexion, or yellow spots on face; weeping; hysterical troubles, especially indicated when there is leucorrhœa.

Veratrum—Nervous headache, nausea and vomiting; coldness of the hands and feet, weakness and fainting.

Sulphur—Headache, principally in back of head; feeling of fullness and weight in head; throbbing and buzzing; pale face, with red spots on cheeks; sour stomach; pressure in abdomen; constipation, with ineffectual urging to stool; or diarrhœa, with mucus, slimy evacuations; piles, leucorrhœa, with itching of the private parts, pains in the loins; difficulty of breathing; irritable temper, and sadness. In chronic cases where the patient is very much reduced, give either China, Graphites, Arsenicum or Natrum Muriaticum.

Administration of Remedies—Dissolve twelve globules in twelve tea-

spoonfuls of water, and give a teaspoonful every one or two hours, according to the urgency of the symptoms. If the discharge does not return, but the symptoms are removed, stop the medicine and commence again, a few days before the next period.

CHLOROSIS OR GREEN SICKNESS

Pulsatilla—For women of a mild and easy disposition, who are given to sadness and tears, or if cold and exposure were the causes of the disease. The following symptoms particularly indicate this remedy: Sallow complexion, alternating with redness and flushes of heat, palpitation of the heart; cold feet and hands; difficulty of breathing, with a sense of suffocation after any exertion; looseness of the bowels, nausea and vomiting; swelling of the feet; chilliness; buzzing in the ears, and neuralgic pains of the face; acrid, burning leucorrhœa.

Bryonia—May be given in alternation (turn about) with Pulsatilla, when there is frequent congestion of the chest; constipation; bleeding from the nose; flushes of heat with chilliness; cough with spitting of clots of dark blood; pain in the small of the back.

Ferrum—When there is great debility; want of appetite; nausea and hectic cough; dropsical swellings about the eyes; extreme sallowness of the skin; the lips are almost bloodless; difficulty of breathing; want of vital heat.

Sulphur—For obstinate cases, especially when the above remedies have not afforded relief, although apparently indicated; throbbing pains in the head; humming in the ears; constant drowsiness in the daytime; voracious appetite; rising of wind or sour substances from the stomach; emaciation; constipation of the bowels, with hard stool; great depression after talking; difficulty of breathing, with oppression of the chest.

Calcarea Carb—Suitable after Sulphur, especially when the emaciation is very great, and there is great difficulty of breathing.

China and Crabo Veg—A dose, alternately, every evening for five or

six weeks, when the disease occurs after severe sickness, or after hemorrhages.

Administration of Remedies—Of the remedy chosen, give five or six globules, dry, once in four hours. If improvement sets in, lengthen the intervals to twelve hours, or two or three days.

Diet—The diet should be perfectly plain and nutritious. Avoid all stimulants and highly-seasoned food. Coffee, green tea and liquors should be forbidden.

PROFUSE MENSTRUATION

Ipecac—When the discharge is bright red, and the menses return too early. It may be followed by Sabina.

Belladonna—When the menses return too soon, and there are bearing down pains, with severe headache, flushed face and cold extremities.

Crocus—This is an important remedy, indicated when the discharge consists of dark colored clots.

Chamomilla—When the discharge is dark colored and accompanied by griping, colicky pains, or labor-like pains; violent thirst, headache, with clouded sight, and humming in the ears.

Nux Vomica—The flow commences with sudden violent gushes, stops for a short time, and begins again. Spasms in the abdomen, nausea, vomiting, fainting. Sensation of heaviness, with pain and soreness as from a bruise.

Calcarea Carb—Good in obstinate cases, where the discharge has continued for a long time, and has caused general constitutional disturbance. Adapted to weak and relaxed muscles, and scrofulous subjects.

Secale—Great flooding, with violent cramp, tingling in the legs, cramps, and coldness of the extremities.

Administration of Remedies—Of the selected remedy, dissolve twelve globules in twelve teaspoonfuls of water, and take a spoonful every half hour, or one or two hours, according to the severity of the symptoms.

PAINFUL MENSTRUATION

Belladonna—When the pains in the abdomen are as if the parts were clutched; severe pain in the back; bearing down pains, as if the parts would fall out; the pains come on before the menses appear, accompanied with a strong tendency of blood to the head, with headache; frightful visions, red and puffed face, and violent thirst.

Pulsatilla—Spasms in the abdomen, with discharge of clots of dark or pale blood; pressing pain in the abdomen and small of the back and sides; nausea and vomiting; frequent urging to urinate, and evacuate the bowels.

Coffea—Great nervous excitement, grinding of the teeth, screaming; distressing colic; fullness and pressure of the abdomen; coldness of the body. May be given in alternation with Pulsatilla.

Chamomilla—Pains resembling labor; menses too profuse, and too soon, attended with violent abdominal cramps.

Nux Vomica—Cramps of the womb, writhing pains in the abdomen, and pains in the back as if it were broken; forcing pains, and sickness at the stomach; urging to urinate.

Secale Cornutum—Tearing and cutting colic, with profuse and long continued flow; pale face, cold limbs, and cold sweat.

Veratrum—Colic, with nausea and vomiting; nervous headache; coldness of the feet, nose, and hands; fainting fits.

CHANGE OF LIFE

The remedies most called for are Pulsatilla, Lachesis, Bryonia, Cocculus, Ignatia, and Sulphur. Generally the treatment may be commenced with Pulsatilla and Lachesis. Give one dose (six globules) of Pulsatilla for four days; then omit all medicines for four days; then give Lachesis in the same manner. If the symptoms abate do not give any more medicine, so long as improvement continues. Bryonia is to be given when

there is a tendency of the blood to the head, dizziness, etc. Ignatia, when the patient is nervous and irritable.

FALLING OF THE WOMB

Belladonna—When there is a feeling of pressure in the abdomen as if the contents would fall out; heaviness in the thighs, with crampy pains in the abdomen, extending even to the end of the spinal column; great sensibility and irritability; leucorrhœa and profuse menstruation.

Sepia—Menstruation too early, too feeble, or suppressed; pains in the back and abdomen, which are aggravated by walking; frequent desire to urinate; pressing pain in the abdomen, as if everything would fall out; itching, burning leucorrhœa, with a discharge of yellowish, reddish, or fetid fluid.

Nux Vomica—Pressure downward, especially when walking, or after walking; heat and weight in the womb and vagina; dragging, aching pain in the back, in the abdomen, and down in the thighs. During the menses, colic, and headache; menses too early and too profuse; leucorrhœa with discharge of yellow fetid mucus.

Calcarea Carb—Excellent for persons of weak muscular system, of scrofulous habit, and especially where the menses are exhausting, too profuse and too frequent.

Commence the treatment with a dose (six globules) of Nux Vomica every four hours, and continue that for one week; omit the next week, but the week following take a dose of Sepia, night and morning. If the symptoms indicate Belladonna, give that instead of Nux Vomica.

LEUCORRHŒA OR WHITES

Pulsatilla—Where the discharge is thin and acrid, making the parts sore, with swelling of the vulva, or when the discharge is like cream, attended with cutting pains in the abdomen. Pulsatilla is best adapted to

women of a mild disposition, with soft, muscular system, light hair and pale skin.

Sepia—Best suited to sensitive and delicate females. The discharge is yellowish, or greenish, sometimes mixed with matter and blood, burning stitches in vagina, and with burning pain and soreness of the parts; falling of the womb.

Alumina—Leucorrhœa after the menses; profuse discharge of mucus during the day, stiffening the linen; burning discharge causing heat, soreness, and itching of the privates.

Calcarea Carb—Leucorrhœa before the menses, with itching, burning discharge at intervals, or when making water. Best suited to females of light complexion, loose muscular tissue, sluggish circulation.

Nitric Acid—For fetid, brownish, greenish, or flesh-colored leucorrhœa.

Mercurius—Purulent, burning leucorrhœa.

Cocculus—Watery, bloody leucorrhœa during pregnancy. Scanty menses, with leucorrhœa between the periods.

Sulphur—In stubborn cases; discharge slimy or yellowish, smarting, excoriating leucorrhœa, preceded by colic.

Administration of Remedies—Of the selected remedy give six pills, morning and evening, for five days. If the case does not improve, give a dose of Sulphur, and omit for four days, and then repeat the remedy as before. If this affords no relief, the remedy must be changed.

INFLAMMATION OF THE LUNGS

This is an inflammation of the substance of the lungs, and is sometimes called lung fever. It is very apt to be complicated with pleurisy, or bronchitis. Pneumonia may be either single or double, that is, one lung may be affected, or both. It is more common upon the right side, than upon the left.

Symptoms—Pneumonia generally commences, as all inflammatory diseases do, with a chill or shivering, followed by fever, pain on one side

of the chest, difficulty of breathing, cough, frequent pulse, breathing quick, and pain, sometimes sharp like a stitch in the side.

The patient cannot lie on the affected side, on account of the pain, and the breathing is more difficult when he lies on the opposite side, hence he lies mostly on the back. A dry, painful cough is present from the beginning, but sometimes it is moist, and the expectoration is white and transparent, becoming afterward rust colored, or streaked with blood. The skin is dry, and there is thirst, flushed face, and anxiety.

The inflammation generally reaches its height about the fifth or sixth day, and the symptoms remain stationary for one or two days, and then begin to subside, and the patient finally recovers. If pneumonia ends unfavorably, the patient lingers along for a great while, and the symptoms gradually grow worse until death ends his sufferings.

Sometimes inflammation of the lungs appears as an epidemic, in which case it is very apt to assume a malignant form, and become typhoid pneumonia. The symptoms are similar to those of simple pneumonia, with the exception of the low condition of the system, which is present.

The inflammation is, however, of a less acute character than pneumonia. As the disease progresses, the active symptoms of pneumonia disappear, and the patient lies in a drowsy state, or stupor comes on, the skin becomes harsh and dry, and the tip and edges of the tongue present a very red appearance, while the upper surface will be coated with a yellowish or brownish fur. The bowels swell and are very tender.

Causes—Cold is generally the exciting cause; hence you will find pneumonia more frequent during the winter than during the summer months. A severe blow, or fall upon the chest, and the inhalation of irritating vapors may also produce it.

General treatment—The patient should be confined to a well ventilated room, the temperature of which should be moderate, not too warm, or too cold. Care should be taken that he is not exposed to draughts of air.

Aconite should be given at the commencement, either alone or in alternation with Bryonia, especially when the fever is high, and the pain in

the chest is severe. The pain is rendered worse by movement, or coughing, the expectoration is bloody and of the color of brick dust, tongue coated, great thirst. These remedies should be given in alternation (turn about) every half hour or hour, a teaspoonful, until the patient is better. Belladonna may be given either alone or in alternation with Aconite, if the fever still increases, and there is considerable congestion of the head, with violent beating of the arteries of the neck and temples.

Phosphorus—This is a valuable remedy in severe cases; may precede Bryonia and Belladonna, either alone or in alternation with Aconite, and especially if the following symptoms are present: A short, hacking cough, especially in the evening, with a sense of suffocation, little or no expectoration; severe pain in the chest; heaviness, fullness and tightness, as though a band were drawn around the chest, great prostration, fullness of the face; stitches in the side, especially in the left, picking at the bedclothes; pulse small and quick. Tartar emetic may be given in alternation (turn about) with Phosphorus, especially when Aconite and Bryonia do not relieve; also when there is great repression of breathing and cough; the cough is loose with profuse expectoration, hollow and rattling; little or no pain; nausea and vomiting, especially after coughing.

Pulsatilla—Difficulty of breathing, especially when lying upon the back. Particularly good for children when there is regular, short coughing, hoarseness and heaviness of the chest.

Mercurius—When Aconite has diminished the fever, but there is still difficulty of breathing, and the patient is exhausted by night sweats.

In typhoid pneumonia, China may be used, especially when the patient is reduced by loss of blood, and when the following symptoms are present: Pressure in the chest, stitches in the breast and sides; palpitation of the heart when breathing and coughing; great weakness, pulse thin and quick. If this does not relieve after having used several hours, Rhus Tox may be given in alternation with it.

Opium—When there is great drowsiness, with snoring breathing, low mutterings, picking at the bedclothes, and discharges passing without the knowledge of the patient.

Hyoscyamus—When the cough is very irritating and spasmodic, face red and hot; eyes sparkling; tongue dry and brownish.

Veratrum—If the pulse is very small and weak, the limbs cold, delirium, vomiting, diarrhœa, and rapid sinking of strength.

Arnica—May be given for the same symptoms as Opium, but when there is no delirium. Camphor and Coffea in alternate doses if the patient is sinking rapidly, with cold limbs, and delirium; and particularly if he is covered with cold perspiration.

Administration of Remedies—Of the selected remedy dissolve twelve globules in as many spoonfuls of water, and give a teaspoonful every hour, two, three or four hours, according to the severity of the symptoms. The diet should be plain, consisting of easily digested substances, such as gruel, etc. It is well to use a poultice of hot corn meal, applied to the chest. This must be continued until the patient is decidedly relieved.

DYSPEPSIA

Dyspepsia is one of the most common diseases with which the physician meets. It is found in every country, among all classes, and more frequently in persons of middle age. Those who are of sedentary habits, who have no opportunity to take exercise; those addicted to the use of liquors, tobacco, etc., are more subject to it than others.

Symptoms—Dyspepsia may be occasional, or habitual. By occasional is meant a slight attack of indigestion, which arises from overeating, or from some indigestible and unwholesome article of food. By habitual dyspepsia is meant those cases which continue for a great length of time—months or even years. In this disease the stomach loses its digestive powers, and the patient is only able to eat by always taking bitters or pills, and drugging himself incessantly.

An occasional attack of indigestion is characterized by a distension of the stomach; belching of wind; loss of appetite; loathing of food; sometimes by nausea and vomiting. In the habitual or chronic form the appetite is changeable, and sometimes entirely lost, or may be voracious.

If the patient eats a full, hearty meal, he becomes low spirited, with pain or weight in the stomach; there is sometimes a desire to eat, after having already eaten, and the first mouthful satisfies; the tongue is pale, flabby or slimy, or becomes dry, clammy or thickly coated, especially on rising in the morning; there is a constant uneasy feeling of weight in the stomach; there are also eructations of a sour or disagreeable character, with acidity of the stomach, and wind; a sensation of sinking or fluttering at the pit of the stomach, tenderness on pressure, sometimes nausea and vomiting; headache, languor, and great depression of spirits; fear of death, and impending evil; palpitation of the heart, or strong beating in the region of the stomach; constipation; disagreeable taste in the mouth, especially in the morning on first waking; the memory is impaired; the disposition is fickle, and the temper is irritable; there is lowness of spirits; confusion of thought, or of ideas; dizziness; weakness of sight, specks appear before the eyes; the countenance becomes sallow with an anxious appearance, skin dry and wrinkled; nightmare is of common occurrence; twitching, or spasmodic action of the muscles; flushes of heat and cold; wandering pains in the back and shoulders; frequent sighing; a sense of great oppression about the region of the heart; noise, or singing in the ears.

Causes—One of the most frequent causes of dyspepsia, is hasty and imperfect mastication of food; want of exercise; want of a tranquil state of the mind; improper food, such as powerful stimulants, alcoholic liquors; too frequent use of warm fluids; the use of tobacco; late hours; highly seasoned dishes; profuse evacuation; sedentary life; long, intense study; indolence; over indulgence in sleep; breathing impure air; venereal excesses; persons who eat rapidly, and at the same time drink large quantities of water, tea or coffee, are more subject to it; going to meals from severe bodily or mental exercise is very injurious; or violent exercise after meals; eating late at night or just before retiring, is another fruitful cause; anger; jealousy; great joy; night watching, etc., are exciting causes; the abuse of purgative medicines, inducing a torpid state of the bowels, is extremely hurtful.

GENERAL TREATMENT OF DYSPEPSIA

Good cooking is a very important part of the treatment of dyspepsia; the food should be well cooked, but not overdone; rare meats are the best for dyspeptics. Persons subject to dyspepsia should avoid all cured meats, such as ham, tongue, smoked or pickled meats, sausages, etc., also raw vegetables, pickles, salads, etc. The food should be masticated slowly and well before allowing it to enter the stomach, each mouthful should be chewed until it is gone, for food when well chewed will enter the stomach of its own accord; different kinds of pastry, hot bread, hot biscuit, eggs, soups, highly seasoned dishes, puddings, etc., must be avoided.

Fish is most digestible when boiled, is less so when broiled, and is least so when fried. Most kinds of wild game may be allowed; mutton, venison, the white flesh of chickens and turkeys, and raw oysters, roasted, baked or boiled ripe fruits, brown or wheat bread, potatoes may be used. Tea, coffee and all intoxicating drinks should be avoided. The best drink is water, or milk when it can be taken without unpleasant symptoms. Too much liquid should not be taken at a meal, and it is better that the patient should not drink until after the meal. At least six hours should elapse between one meal and another, In healthy stomachs, however, from three to four hours is sufficient. Persons should never travel or enter upon an excursion with an empty stomach, or with an overloaded one. In drinking it is better that it should be taken by sipping, or drinking by mouthfuls than by large draughts. After exercise of any kind, such as riding, walking, etc., the person should rest at least half an hour before taking a meal, and after taking a meal; a rest of about the same time should follow before any exercise is taken. Walking, running, jumping, dancing, sawing wood, or rowing a boat, should be practiced regularly every day. The following table is, with slight modification, from Dr. Leared:

Easy of Digestion—Mutton, venison, hare, sweet bread, young pigeons, partridge, pheasants, grouse, beef tea, mutton broth, milk, turbot, haddock, flounders, sole, fresh fish generally, roasted oysters, stale bread,

rice, tapioca, sago, arrowroot, asparagus, secale, French beans, cauliflower, baked apples, oranges, grapes, strawberries, peaches, toast water, black tea, sherry, claret.

Moderately Digestible—Beef, lamb, rabbit, turkey, duck, wild water fowl, woodcock, snipe, soups, eggs not hard boiled, butter, turtle, cod, pike, trout, raw or stewed oysters, potatoes, turnip, cabbage, spinach, artichoke, lettuce, celery, apples, apricots, currants, raspberries, bread, farinaceous puddings, jelly, marmalade, rhubarb plant, cooked fruits, cocoa, coffee, malt drinks, port wine.

Hard to Digest—Pork, veal, goose, liver, heart, brain, salt meat, sausage, hashes and stews, mackerel, eels, salmon, herring, halibut, salt fish, lobster, crabs, shrimps, mussels, oil, melted butter, hard boiled eggs, cheese, fresh bread, muffins, buttered toast, pastry, custards, nuts, peas, plums, cherries, dried fruits, cucumbers, onions, carrots, parsnips, beets, beans, mushrooms, pickles, chocolate, champagne, cordials.

To facilitate the choice of remedies the disease is here classified, with the remedies attached to each kind. Before selecting a remedy, consult the details below:

For dyspepsia of adults, Aconite, Antimony, Arnica, Belladonna, Bryonia, Calcarea Carb., Carbo Veg., Chamomilla, China, Hepar Sulphur, Ipecac, Mercurius, Nux Vomica, Pulsatilla, Phosphorus, Sepia, Sulphur, Veratrum.

Of children, Aconite, Bryonia, Calcarea Carb., Chamomilla, Ipecac, Pulsatilla, Sulphur.

When dyspepsia is caused by prolonged watching, Nux Vomica, Arnica, Pulsatilla, Veratrum, Carbo Veg.

By excessive study, Nux Vomica, Sulphur, Lachesis, Pulsatilla, Calcarea Carb.

By abuse of ardent spirits, Nux Vomica, Sulphur, Lachesis, Arsenic, Carbo Veg.

By the abuse of coffee, Nux Vomica, Ignatia.

By the abuse of tobacco, Nux Vomica, Hepar Sulphur, Cocculus, Staphysagria.

If the Dyspepsia is worse after drinking cold water, Arsenic, China, Pulsatilla, Veratrum.

After drinking beer, Arsenic, Calcarea Carb., Rhus Tox, Sepia, Sulphur.

After drinking milk, Bryonia, Nux Vomica, Calcarea, Sulphur.

After using acids, Nux Vomica, Sepia, Sulphur, Arsenic, Lachesis.

After using bread, Nux Vomica, Sulphur, Pulsatilla, Bryonia, Mercury.

After eating fat substances, Pulsatilla, China, Carbo Veg.

If Dyspepsia is combined with constipation, Nux Vomica, Sulphur, Bryonia, Lachesis.

If with diarrhœa, Pulsatilla, China, Phosphoric Acid, Carbo Veg., Mercury, Arsenic, Veratrum.

If with sour stomach, Pulsatilla, Nux Vomica, Calcarea Carb.

If with piles, Nux Vomica, Sulphur, Sepia.

Aconite—When at the commencement of the attack there is considerable fever, with thirst, and nausea; also when there is redness and soreness of the mouth and throat.

Arnica—When it is caused by a fall, or a blow upon the stomach, with pain, and sensation as if the small of the back was broken; tongue covered with a thick, yellowish coating; nausea, with inclination to vomit; frequent eructations with a putrid or bitter taste; nervous excitement; heaviness of the limbs.

Nux Vomica—Suitable in most cases of dyspepsia, at the commencement; particularly when there is constipation and tendency to piles; sour, bitter taste in the mouth; when food, particularly bread, tastes sour, bitter, or insipid; the patient has not much appetite, but a craving for beer, wine or spirits; easily satisfied with food; after eating he is troubled with nausea; vomiting of food; dizziness; heaviness; drowsiness; fullness and distension of the stomach; tender to the touch; head confused; reeling, with dullness in the head; headache, increased by mental exertion; ringing in the ears; tongue coated white; metallic, bitter, sour or putrid taste in the mouth in the morning, or after eating; heartburn; wind colic; feel-

ing of tightness of the clothes around the waist; sour stomach; ineffectual urging to stool; hard and difficult stool streaked with blood. Sulphur suits well after this.

Sulphur—Especially good in cases of long standing, or when there is no appetite for meat and bread, but with a craving for wines and acids; difficulty of breathing; nausea after eating; belching and vomiting of food; shivering; acidity and waterbrash; sour stomach; mental depression, dissatisfied with everything and everybody. Calcarea Carb. suits well after this.

Pulsatilla—An important remedy in dyspepsia; particularly for recent cases caused by overeating; by the use of pork, mutton, butter, or any greasy substance; taste of the food comes up again in the mouth; inclination to vomit, especially after eating or drinking; taste flat, or putrid, resembling bad meat or tallow; pressure in the pit of the stomach, especially after eating; the patient feels chilly, is weak, cross and melancholy.

Antimonium Crudum—Particularly useful when the disorder is caused by an impure atmosphere, and when the following symptoms are present: Taste of the food last partaken of comes up in the mouth, gulping up of articles of undigested food soon after eating; tongue coated with a white or yellowish mucus, stomach feels tender to the touch, and distended.

Belladonna—When there is painful distension of the abdomen, with griping, as if the bowels were clutched; hiccough; nausea, or a loathing of food; vomiting of water or bile, also when there is dullness of the head, or congestion of blood to the head.

Arsenic—Particularly useful in chronic cases; when the countenance is sunken; the extremities cold; dark circles around the eyes; nose pointed; tongue white, or brownish; also when there are cramps in the stomach; with a sense of coldness or heat; everything taken into the stomach is vomited; the skin is hot and dry. If Arsenicum does not produce a beneficial effect, give Lachesis.

Bryonia—An important remedy for dyspepsia, especially when it occurs in summer; also when it is accompanied with chilliness, headache

and pain in the limbs, and small of the back; also with the following symptoms: Tongue covered with yellowish fur, and dry and hot; loss of appetite; bitter taste; great aversion to food; sometimes has a great craving for food; a craving for acid drinks; sensation of fullness and burning in the stomach after meals; much thirst; gulping up particles of food after every meal; waterbrash; constipation of the bowels; nausea in the morning; burning in the stomach; temper irritable and obstinate. Should Bryonia produce little or no improvement, give Rhus.

China—Dyspepsia from loss of blood or other discharges, when caused by an impure atmosphere, and when the following symptoms are present: Pressure in the stomach, as if from a load; indifference to food and drink; craving for wines or acids; flat or bitter taste in the mouth; desire for a variety of dainties without knowing which; morbid craving for something strong, sharp or sour; weakness and tired feeling; the patient bends and stretches his limbs from a sense of weariness.

Cepa—No hunger, but considerable thirst; fullness of the head; pain in the bowels from wind.

Carbo Veg—Loss of appetite, bitter taste in the mouth, empty belching of air, taste of the food after it has been taken, nausea in the morning, waterbrash during the night, wind colic, rumbling in the abdomen.

Calcarea Carb—Particularly for children who have a tendency to scrofula; acidity of the stomach, frequent belching of wind, sensation of fullness in the head, with inclination to sick headache; fullness and swelling in the region of the stomach, with tenderness to the touch, gnawing or griping pains.

Chamomilla—Especially for dyspepsia brought on by a fit of passion, or by standing in a draught when perspiring; gulping up of food, nausea, vomiting of food and green phlegm or bile; cramps in the stomach, headache, fullness, giddiness, sleep disturbed, and tossing about, face red and hot.

Hepar Sulphur—For dyspepsia when caused by taking blue pills, or other preparations of mercury, hungering for stimulating things, wines or acids, the stomach appears to be very sensitive and easily deranged,

though the patient may be healthy; nausea in the morning, with vomiting of sour, bilious or mucus substances. May be given in alternation with Nux Vomica, if there is hard, light colored stools, or with Mercury if there is a whitish diarrhœa.

Ipecac—Especially suitable for children when they have vomiting of food, drink, or bile, vomiting with coldness of the face and extremities, tongue coated with a white yellowish coating, vomiting with diarrhœa, aversion to food, particularly of fat, rich food, or for dyspepsia caused by eating turkey, pastry, etc.

Mercurius—Belching of acrid, bitter substances, putrid, sweetish, or bitter taste in the morning; inclination to diarrhœa, with straining or perspiration, weak digestion with constant hunger, pressure at the pit of the stomach after eating. Suits well before or after Lachesis.

Phosphorus—Empty belching, especially after eating, vomiting after eating, burning in the stomach.

Sepia—For chronic dyspepsia with or without sick headache, eructations sour or putrid, or tasting of food; swelling of the abdomen, with pressure as from a stone; nausea before breakfast, also after eating; nausea of pregnant women.

Lachesis—Irregular appetite, an aversion to bread, with a craving for wine and milk; frequent nausea, and vomiting of food; constipation, uneasiness, indolence, heaviness. Suits well before or after Mercury.

Veratrum—When Ipecac has proved insufficient, or where, after the use of Ipecac, there is still diarrhœa with griping pains in the bowels, and great thirst, coldness of the hands, and shuddering all over.

Other remedies, as Rhus, Phosphoric Acid, Cocculus, Ignatia, Staphysagria, are sometimes but not often called for.

Administration of Remedies—In recent cases, and if there be much pain and sickness at the stomach, take of the selected remedy a dose every half hour, hour, two or three hours. As soon as the severity of the symptoms begin to abate, the intervals should be lengthened. In chronic cases the remedy should be repeated three times a day. Wher the globules are used, use ten for an adult.

IRRITATION OF THE SKIN

This is an eruption of a fine rash under the skin, and colorless. It produces a very disagreeable and distressing itching, which is sometimes almost unbearable. The severer form is accompanied by a sensation of creeping ants, or the stinging of insects. It lasts sometimes for months and years, and is generally caused by exposure to extremes of heat and cold, some particular kinds of food, etc.

General Treatment—Wash well every evening before going to bed, with water and Castile soap, and allow it to dry in. Brandy or alcohol may be used in the same manner. An ounce of lemon juice in a pint of water or vinegar, used in the same proportion, will be found useful; also water and spirits of camphor. The diet should be carefully regulated, and all stimulants avoided.

Pulsatilla—If the itching is worse in bed, or when near a fire, particularly after scratching. A dose (six globules) every night and morning.

Ledum Palustre—If the itching commences after going to bed, and shifts from one part to another, and the eruption resembles flea bites. Give in the same manner as Pulsatilla.

Mercurius—When the itching continues during the whole night, and bleeds easily after scratching. It is well to give this remedy and Causticum on alternate evenings.

When it occurs in old people, give Opium and Secale, a dose (six globules) on alternate evenings.

When it is caused by the heat of summer, give Lachesis and Lycopodium on alternate evenings.

Silicea and Sulphur are good for obstinate cases.

HYSTERIA

This is an affection peculiar to women of a nervous or nervous-sanguine temperament, with cheerful, lively and ardent dispositions and vivid imaginations. It takes its name from the Greek word meaning the womb,

and was supposed to be caused by some irritation arising from diseases of the generative system.

Causes—Delicate, nervous temperament, confinement in close and over-heated apartments, the reading of exciting works of fiction, and attending theatrical exhibitions, tight lacing, want of exercise, want of sleep, excessive fatigue, luxurious living. The exciting causes may be violent mental emotion, such as anger, rage, grief, fright, disappointed love, the sight of disagreeable objects, or the smell of disagreeable odors, indigestion.

Symptoms—An attack of hysterics is generally preceded by low spirits, and it occurs in paroxysms of greater or less duration. It is found more commonly among widows and the unmarried than the married, and the paroxysms are more likely to occur about the period of menstruation than at any other time. Generally, preceding or during the attack, there is a sensation as of a ball ascending from the left side of the abdomen to the throat, causing a sensation of strangulation. The patient cries and laughs alternately, or gives vent to sobs and floods of tears, wringing the hands and tearing the hair. Sometimes the body and limbs are violently convulsed, and the patient may struggle, so as to require the strength of several persons to hold her. The head is thrown back, and there is delirium and loss of consciousness. These are a few of the symptoms which occur in this disease.

General Treatment.—The patient should be placed in a draught of fresh air, and the dress loosened, so as to allow free circulation and breathing. The head and face should be washed freely with cold water, and sometimes a bucket of cold water thrown over the patient will bring the spasm to an end.

When the attack arises from costiveness, and is attended with bitter or sour taste in the mouth, fullness and pain in the stomach, nausea, weakness, headache, dizziness, Nux Vomica and Sulphur should be given—Nux Vomica at night, and Sulphur in the morning.

Pulsatilla, Sabina, Silicea.—If the attack is caused by the derangement of the generative organs.

Ignatia, Hyoscyamus, Belladonna, Coffea—If the attack has been caused by any violent mental excitement, as anger or fright.

Administration of Remedies—During the paroxysms, of the selected remedy, give a solution of twelve globules in twelve teaspoonfuls of water.

Dose, a teaspoonful every ten or fifteen minutes.

In the intervals of the paroxysms, six globules every twelve hours will be sufficient.

HEADACHE FROM CONGESTION OF BLOOD TO THE HEAD

Symptoms—Throbbing in the head and beating of the arteries of the neck, vomiting as the pain increases, pain also in shaking or moving the head, lying down or stooping.

General Treatment—Bathe the head with warm water and vinegar and bathe the feet also with warm water, rubbing them hard afterward. Bathe the temples and forehead with warm or cold water as the patient may desire.

Aconite—Violent throbbing, humming sensation over the whole brain, forehead and face red and bloated, eyes red and sensitive to the light, pain worse in morning, on drinking, talking, or rising up, pulse full and quick.

Belladonna—Violent aching pains as if the head would split or the brain protrude from the forehead, head hot, feet cold, a feeling as of water in the forehead; violent beating of the arteries of the neck and temples, delirium, with a red, bloated face, eyes bloodshot, with great sensitiveness to light, noise and touch, and afterward deeply seated pressing pains, with a pale face and drowsiness, feeling worse on moving the eyes or raising or moving the head. This may be given in alternation (turn about) with Aconite, if Aconite does not relieve.

Pulsatilla—Pain dull and oppressive on one side only, commencing at the back of the head or root of the nose, relieved by compression or lying down, and worse while sitting or walking; face pale, mind agitated, inclination to weep, dizziness. This is more suitable for females and persons of mild temperament.

Bryonia—Distending pressure from within, particularly through the

forehead in stooping or moving, with violent beating or stitches in the head; constipation of the bowels, and bleeding at the nose.

Rhus Tox—Fullness in the head with burning and throbbing pain, weight in the back part of the head, with a sensation as of a fluid rolling inside; may be given in alternation with Belladonna or Bryonia.

Nux Vomica—Pains worse in the morning and in the open air, heaviness of the head, especially on moving the eyes and thinking, sensation as if the skull would split, bruised pain in the brain, worse on stooping or motion; rush of blood to the head.

Opium—Constipation, with rush of blood to the head, violent tearing and pressing pains through the whole brain, and heaviness, with beating in the head.

Administration of Remedies—Dissolve six globules in three tablespoonfuls of water, and take a teaspoonful every half hour, hour, two, three, or four hours, during the attack, according to the severity of the symptoms. If not relieved within a few hours, select a new remedy.

SICK HEADACHE

This form of headache is generally of a chronic nature, and depends upon some derangement of the stomach or bowels. It receives its name from the constant nausea and vomiting which usually attend it. It usually begins in the morning, or on waking from a deep sleep, or after sleeping in a close room, or when some irregularity in the diet has been committed. At the first there is an oppressive feeling in the head, which gradually becomes dull and aching, moving from one point to another. There is a sensation of fullness and tenderness in one eye, extending across the forehead, the tongue is coated with a yellowish white fur, and there is an unpleasant clammy taste in the mouth. The hands and feet are cold and moist, and the pulse feeble. Accompanying these symptoms, there is a depressing sickness at the stomach, which is increased by sitting up and moving about, the pain being generally relieved by vomiting.

Belladonna—Headache coming on at certain times, pains return in the afternoon and continue until after midnight, being aggravated by the

warmth of the bed, or lying down, the headache stupefying, mostly in the forehead, and accompanied sometimes with loss of consciousness. There is a sensation as if the head would split, the pains being of a violent burning, rending or shooting character, commencing sometimes gently, but afterward increasing to a fearful intensity. This remedy may also be used for headache after taking cold, when there is a jolting sensation in the head and forehead, on stooping or going up stairs, buzzing in the ears, dimness of sight, pains extend to the eyes and nose, but mostly confined to one side, usually the right, and are aggravated by every motion, by turning the eyes, by bright light, by the slightest noise, by stooping forward, or leaning the head backward, scalp very sore; there is alternate chilliness and heat, tongue being coated, accompanied with nausea, and loathing of food.

Ipecac—Stitch-like pains and great heaviness, giddiness when walking, pressure in the head, especially in the forehead, the pains affecting the bones of the skull, with coldness of the hands and feet, the tongue coated white or yellow, nausea and vomiting. This is to be given in cases of headache which commence with nausea and vomiting, accompanied with a bruised sensation about the head. This may be given in alternation with Nux Vomica, when there are shooting pains in the side of the head, worse in the open air, and vomiting.

Hyoscyamus—If with the headache there is great sensitiveness to light, and where the pain is worse in the warmth of the bed on lying down, or in a draught of air.

Spigelia—Pains worse on the left side, great sensitiveness to noise, beating in the temples, which is aggravated by the least motion, even by opening the mouth; the headache appearing at regular times each morning and increasing in severity as the day wears on. This remedy may be given in alternation with Belladonna.

Aconite—Cramp-like pains through the forehead or above the root of the nose, headache as though the brain were raised or moved about, especially upon motion; the least noise or motion is intolerable, the pain being aggravated by reading or speaking. With this sensation there is

buzzing in the ears, and a feeling on the top of the head as though the hair was being pulled.

Sanguinaria—Chilliness and nausea, great sensitiveness to the talking of others in the same room, accompanied with a fullness of the head as if it would burst, the sensation being worse on the right side, with a feeling as if the eyes were pressed outward.

Antimonium—Dull, boring pains, especially in the bones of the head, boring in the temples and forehead, from within, outward; pains worse in the open air, accompanied with rush of blood to the head, nausea and vomiting of bile and mucus. Pulsatilla may be given where Antimonium does not relieve.

Aloes—If the patient complains of stitches in the left temple, the headache appearing periodically.

To eradicate the disposition to sick headache, Pulte recommends that Sepia, Silicea and Sulphur should be taken, each remedy for six weeks, commencing with Sepia; for the first three weeks, take each week two doses in the evening on going to bed; for the last three weeks, one dose every week.

Administration of Remedies—Three or four globules may be given at a dose, or if dissolved, put twelve globules in as many teaspoonfuls of water, and take one teaspoonful at a dose. This may be repeated every fifteen minutes, half hour, hour, or two or three hours, according to the severity of the symptoms.

NERVOUS HEADACHE

This headache occurs more frequently among women.

Symptoms—Acute, lancinating, excruciating or darting pains, worse in the light, a feeling as if the temples were being pressed together, dizziness, with a feeling of sinking down, great despondency and restlessness, exertion, either physical or mental, impossible; dark spots floating before the eyes, head generally cool, and face pale. The pain is frequently confined to small spots, and is generally worse in the morning.

Treatment—Coffea—Pain as if a nail was being driven into the head, or as if the brain were bored and bruised, seeming to be intolerable, and

driving the patient almost distracted; the patient very restless, screams, weeps, has an aversion to the open air; pain excited or aggravated by the slightest noise, even music being sufficient to produce this effect. This may be followed by Hepar Sulphur, Nux Vomica or China.

Aconite—For symptoms calling for the administration of this remedy, see Sick Headache.

Belladonna—Especially when the pains come on in the afternoon, and last until the next morning, and also when the pain commences gently and increases to a fearful intensity.

Ignatia—Aching pains above the nose, relieved by bending the head forward, pressing of the head, from within outward, sensation as if a nail had been driven into the head, with nausea, dimness of sight, pale face, pain momentarily relieved by change of position; the patient is full of fear, inclined to start, impatient, and wants to be let alone.

Pulsatilla—Tearing pains, worse toward night, accompanied by dizziness and sickness at the stomach, dimness of sight, ringing in the ears, countenance pale, yellowish, or haggard, no thirst, chilliness, palpitation of the heart, a feeling as if the brain would be torn, or as if the head were in a vise, or as if the skull would fly to pieces, especially when moving the eyes; headache after lying down in the evening, or early in the morning in bed, increased by quiet, or sitting still, and relieved in the open air, or by the pressure of a tight bandage.

Bryonia—Fullness or heaviness of the head, with pressing or burning pains in the forehead, sensation as if everything would fall from the forehead when stooping; tearing pains which extend to the face and temples, heat in the head and face, with red cheeks, and thirst, nausea and vomiting, everything having a bitter taste, headache worse when moving about, or on moving the eyes.

Platina—Headache generally increases and decreases, roaring in the head as of water, with coldness in the ears, eyes, and on one side of the face; twitching of the eyelids, buzzing in the ears, objects appearing smaller than they really are, stupefying pressure on the cheek bones. Is useful after Belladonna.

Mercurius—Headache as if the head would fly to pieces, with fullness of the brain, tearing sensation, especially in the left side, a pain shooting down from the teeth, stitching pain in the ears, the pain being relieved by pressing the head with the hands. This may follow Belladonna, and where both these remedies fail to give relief, give Hepar Sulphur, especially when there is a boring pain at the root of the nose, or a sensation as if a nail were driven into the head.

Colocynth—Violent, tearing, excruciating pain on one side of the head, pressing in the forehead, worse on stooping, or lying on the back, headache coming on every afternoon, or toward evening, and is attended with a copious flow of urine, very offensive, together with profuse perspiration smelling like urine.

Arsenicum—Beating pain in the forehead, inclination to vomit, buzzing in the ears, weeping and moaning, tenderness of the scalp. Cold applications relieve this pain for awhile. It is worse when within doors, and relieved on going out into the open air. This remedy may follow Pulsatilla.

Veratrum—Oppressive headache on top or on one side of the head, accompanied by pains in the stomach, and diarrhœa, nausea and vomiting, painful sensitiveness of the hair. The pain is sometimes so severe as to deprive the patient of reason, is worse when lying in bed, accompanied with cold perspiration and chills. This remedy suits well after Arsenicum.

Silicea—Pain ascends from the back of the neck to the top of the head, often caused by getting heated. Tearing pain comes on in the forenoon, stitches in the head, especially in the temples, scalp painful to contact, and the hair falling out.

Sulphur—Headache with nausea, feeling of fullness or weight in the head, especially at the top, pain as of a hoop around the head, and throbbing, tearing pains, with heat, after arising in the morning, headache every day as if the head would split to pieces, humming in the head, hair painful to touch, or falling out.

China—Suitable for a person sensitive to pain, of a feverish, dissatisfied

disposition. This remedy will be found advantageous where there is heaviness in the head, pressing from within the head outward, tearing pain in the temples as though the head would burst, sensation as though the brain jolted about, and hit against the skull, the scalp tender to touch, pain aggravated by contact, motion, stooping, conversation, or by a draught of air. Water, either hot or cold, as is most agreeable, may be applied to the head.

Administration of Remedies—Give four or six globules at a dose, or dissolve twelve globules in as many teaspoonfuls of water, and give a teaspoonful every half hour, hour, or two hours, according to necessity.

EARACHE

This complaint should not be confounded with inflammation of the ear, as it is quite a different thing, there being no fever present, and the pain is rather of a neuralgic or rheumatic nature. The attacks come on suddenly, and are generally of short duration; the pain shoots over the head. The cause is generally, taking cold.

Pulsatilla—Is the principal remedy in this complaint; particularly if the pains are darting and tearing, as if something would press out the ears. The ear is red and hot, swollen; where there are itching and tearing pains through the whole side of the face; particularly applicable to females and persons who are inclined to be chilly.

Chamomilla—Particularly where the pains are acute, and short as if from a knife wound, especially after taking cold or after perspiration has been suddenly checked; tearing, lancinating pains, which extend to the lobes of the ear, the patient very cross and irritable.

Belladonna—When there is congestion of blood to the head with stitches in and behind the ear, tearing, boring or sporting pains extending to the throat.

Hepar Sulphur—May be given for the same symptoms as Belladonna, especially when the latter does not relieve; also when the pain is beating, throbbing and roaring.

Mercurius—If Pulsatilla or Chamomilla do not relieve; also where the pain is tearing, extending to the cheeks, pains are worse in a warm room, and there is a sensation in the ear. The patient perspires a great deal without relief.

Nux Vomica—When the pains are violent, of a tearing, stinging nature and extending to the forehead and temples, and down to the bones of the face.

Spigelia—When there is a painful aching as if a nail was sticking in the ear, aching and tearing in the cheek bones.

Rhus—Suitable when the earache is caused by taking cold.

Arnica—When the pain returns on the slightest occasion with great sensitiveness, and noise, and pressing, and singing in, and behind the ears; more suitable for sensitive, nervous persons.

China—Suits frequently after Arnica or Pulsatilla, especially if the pains are tearing and are felt more outside the ear, are made worse by touching the ear, singing and ringing noises in the ear.

Administration of Remedies—Of the remedy selected, dissolve twelve globules in twelve teaspoonfuls of water, and give a teaspoonful every fifteen minutes, half hour, or two hours, according to the urgency of the symptoms. It sometimes happens after the severe pain has been relieved by these remedies, that soreness and grumbling pains remain in the ear; for this, Sulphur or Calcarea Carbonica may be given, one dose night and morning.

COLD IN THE HEAD—CATARRH

This is an affection of the mucous membrane of the nose and throat, sometimes extending into the windpipe and lungs.

Symptoms—The catarrh usually commences with dull pain and sense of weight in the forehead, oppression at the chest, and difficulty in breathing, frequent sneezing, heaviness of the head, and dryness and fullness with stuffing in the nose, soreness of the throat, hoarseness, eyes more or less red and watery; in a short time a thin fluid is discharged from the

nose, the cough becomes more moist, and the expectoration becomes yellow and thick, the patient complains of a roughness or soreness of the throat, loss of sense of smell, dullness of hearing, hoarseness, tickling cough; the person affected is generally worse at night, with some fever and severe pains in various parts of the body, thirst, and flashes of heat alternating with chilliness. When the inflammation is confined to the mucous membrane of the nostrils, there is sneezing, a sense of fullness and heat of the parts, with a thin, watery discharge.

Treatment—Aconite—Is always proper in the beginning of a cold, even if there is but slight fever, also when the discharge from the nose is suppressed and is followed by a headache. Camphor is also good for the same symptoms; if there is nothing but the ordinary Spirits of Camphor convenient, one or two drops should be put on a lump of sugar, and the sugar dissolved in a tumbler half full of water, and give according to the directions.

Arsenicum—Not much fever, heat or thirst, patient restless, particularly at night, drinks often and but little at a time, discharge acrid and corrosive, burning heat of the nose, the discharge produces a swelling of the adjacent parts, redness and watering of the eyes. Ipecac may be given if Arsenic does not relieve.

Nux Vomica—Should be given when there is obstruction, with little if any running from the nose, but if there is running, it is in the morning, with dryness at night, mouth dry and parched without much thirst, constipation, fever and chills alternate in the evening.

Chamomilla—When the difficulty is caused by checked perspiration, shivering, with heat and thirst, heaviness of the head, swelling of the face, and redness of the cheek, redness and inflammation of the eyes.

Mercury—Constant sneezing, soreness of the nose, with constant watery discharge, which produces soreness of the part with which it comes in contact, swelling and redness of the nose, tearing headache, pains in the bones of the nose, Catarrh worse in the morning, offensive smell.

Belladonna—Swelling, redness and burning of the nose, pain in the

nose, aggravated by touching, throbbing pain in the head, aggravated by motion.

Hepar Sulphur—Particularly when but one nostril is affected, burning headache, especially about the root of the nose, which is made worse by the slightest movement, Catarrh renewed by every breath of wind. Hepar should be given, especially when Mercury affords but little relief.

Pulsatilla—Thick, green or yellowish discharge through the nose, which is very offensive, heaviness and confusion in the head; frequently toward night and in the warmth of the room, the obstruction of the nose increases, pain in half of the head, frequent sneezing, painful pressure at the root of the nose, flying pains from place to place, roaring in the ears.

Euphrasia—Especially when the eyes are irritated and watery.

Lycopodium—Obstruction of the nose, especially at night, sense of smell very acute, tearing pains in the forehead, dryness of the mouth, without thirst.

Silicea—Chronic Catarrh, with severe pains in the bones of the nose. Tartar Emetic may be given in some cases, when there is sneezing, chilliness, loss of taste and smell; sometimes when the secretion becomes suppressed, or before it has commenced, and the nose is hot and dry, a little almond oil, or cold cream may be applied to the inside of the nose with a feather, or a camel's hair pencil, or a vapor of hot water may be allowed to pass up the nostril, which will be found to afford some relief.

Administration of Remedies—Where the directions are not given with the remedy, dissolve twelve globules in twelve teaspoonfuls of water, and give a teaspoonful every hour or two or three hours, according to the urgency of the symptoms. The application of water is very beneficial in this disease and may be used at the same time that the remedies are being given; the patient should be confined to a room which is not too warm, and a wet bandage should be applied around the breast and abdomen, and the patient should remain in bed, well covered, and be allowed to drink plenty of cold water to induce perspiration. After having perspired some time, take a milk-warm bath.

NEURALGIA

Neuralgia is one of the most painful affections to which the human family is subject. In plain language, it means pain in the nerve, as the pain generally follows along the course of a nerve, though at other times, the pain is confined to a particular spot, and may arise from a distant source of irritation, as the brain, stomach or bowels. In most cases, the pain is the only symptom, there being no swelling or other sign of inflammation. Neuralgia may affect different parts of the body, but is more generally confined to the head.

Neuralgia of the face is mostly confined to the fifth pair of nerves, which branch out over the face. The branch over the eyebrows is most frequently affected, but sometimes all the branches are affected, the pain being very severe. The attack generally comes on suddenly, with a sensation as of a shock of electricity, subject, however, to intermissions and remissions; the pain is very sharp, darting and lancinating, shooting along the nerves, the sensation being frequently as if red hot wires were thrust into the part.

After the pain has passed away, it is generally succeeded for a considerable time by numbness. Sometimes, however, the attack comes on gradually, becoming constantly more severe. During the paroxysm, the features are apt to be distorted, by the spasmodic action of the muscles of the face.

Causes—A current of air, sudden jar or shock, exposure to damp air, debility, derangement of the digestive organs, etc.

Treatment—Aconite—Throbbing, burning, shooting pains, appearing in paroxysms, and preceded by slight aching or crawling pains, worse at night, swelling of the cheek or jaws, thirst, agitation and tossing about, pain confined to one side of the face, violent beating of the arteries of the neck and head, eyes sparkling, buzzing pain through the ears, temples and sides of the neck, fever.

Belladonna—Paroxysms commencing gradually, with a creeping or itching in the affected part, cheeks red and swollen, darting, shooting,

drawing pains in the cheek bones, nose and jaw, twitching of the eyelids and muscles of the face, throbbing pains in the forehead, roaring in the ears, heat and redness of the face, great sensibility to cold and light, pain violent, especially on one side, generally the right, pains aggravated by the slightest noise or movement, and also by the warmth of the bed. Where Belladonna does not relieve, but seems indicated, give Atropine.

Bryonia—Especially for persons who are subject to rheumatism; face red, burning and hot, swelling on one side, under the eyes and at the root of the nose, pressing, drawing, burning pains, worse upon pressure, pains in the limbs, chilliness, followed by fever.

Chamomilla—Especially for females who are extremely sensitive; pain tearing and beating, with a sensation of numbness in the affected part, face puffed and swollen, one cheek red and the other pale, shivering, with internal heat.

Colocynth—Violent rending, darting pains, extending to the ears, nose, temples, teeth and all parts of the head, principally upon the left side, pain aggravated by the slightest touch.

Arsenicum—Pains return at certain periods, and are of a burning character, worse at night, relieved by the application of heat, great anguish, profuse perspiration, severe pain in and around the eyes and temples.

China—Especially when the attack appears periodically, great pain, sensibility of the skin, aggravated by the slightest touch, severe pain through the cheek bones.

Nux Vomica—Tearing, drawing pains, swollen cheeks, pain coming on in the morning after rising, increasing until noon, and then gradually diminishing until night, nausea, vomiting, constipation, pain aggravated by cold air and drinks, and relieved by rest and warmth.

Platinum—Stupefying pressure upon the cheek bones, with a feeling of coldness, pain worse at night, great nervousness and melancholy.

Spigelia—Jerking, tearing, burning and pressure in the cheek bones, worse on touch or motion, pains coming on at certain time in the day, worse on stooping.

Coffea—Great irritability of the mind and body, great sensibility, excessive painfulness in the affected part.

Pulsatilla—For females, especially when connected with uterine derangements, painful sensitiveness of one side of the face, with shivering.

Mercurius—Tearing and shooting pains on one side from the temple to the teeth, worse at night, and in the warmth of the bed, nightly perspiration, too much saliva in the mouth, sleeplessness.

Phosphorus—Tearing pains in the left side, worse on moving the muscles of the face in eating.

As an external application either cold or warm water, as best suits the patient, will be found beneficial. Great relief may sometimes be obtained by bathing the affected part with a mixture of six drops of the Tincture of Aconite, to six tablespoonfuls of water.

Administration of Remedies—Of the remedy chosen, dissolve twelve globules in twelve teaspoonfuls of water. Of this solution give a teaspoonful every fifteen minutes, half hour, or two hours, according to the urgency of the case. As the patient grows better, lengthen the intervals to four, six, eight, or ten hours.

Diet—Coffee and green tea should be avoided by persons subject to Neuralgia, and care should be taken not to eat food which is known to disagree, or is proved to be indigestible.

OFFENSIVE BREATH

Offensive breath is induced by a variety of causes, among which are defective teeth, perverted secretions of the glands of the mouth, neglecting to clean the teeth, by tartar, or bits of food allowed to remain in the mouth. The most obstinate cases result from imperfect digestion, caused by derangement of the liver, or other organs.

Mercury—If caused by inflammation of the gums and glands of the neck.

Arnica, Nux Vomica, Belladonna, Silicea or Sulphur, if there is no particular cause for it, or if it appears only in the morning.

Chamomilla, Nux Vomica or Sulphur, if it is noticed after meals.

Pulsatilla or Sulphur, if in the evening, or at night.

Administration of Remedies—Give a dose of six globules every evening for one or two weeks, before changing to another remedy. If the odor is occasioned by the eating of onions or garlic, it may be destroyed by taking a little wine, eating a pear, or boiled beets.

Bad Taste in the Mouth—This may be caused by many diseases, but is found most frequently in fevers and disordered stomach. Sometimes, however, it appears as a solitary symptom.

Treatment—Cuprum, Rhus and Cocculus—If the taste is coppery.

Lachesis, Mercury and Nux Vomica—If the taste is metallic.

Arnica, Bryonia, Sulphur, Rhus, Mercury and Pulsatilla—If the taste is putrid.

China, Pulsatilla or Mercury—If the taste is earthy.

Bryonia, Pulsatilla, Arnica and Chamomilla—It the taste is bitter.

Mercury, Pulsatilla and Sulphur—If the taste is sweetish.

Mercury, Nux Vomica, Arsenic, Tartar Emetic and Carbo Vegetabilis —If the taste is saltish.

Administration of Remedies—Take one dose (four globules) of the remedy selected, twice a day.

SORE THROAT—QUINSY

This disease consists in an inflammation and swelling of the back part of the throat, palate and tonsils, which interferes with the breathing to more or less extent, and occasions high fever. It may appear as a slight irritation of the throat, or form abscesses in the tonsils or sides of the throat, and become very painful.

Symptoms—Quinsy generally begins with restlessness, high fever, slight cough, more or less soreness of the throat, especially when swallowing, smooth and shining redness of the tonsils and throat, face flushed with considerable fever, breath quickened, voice thick, speaking sometimes difficult or painful, glands of the neck sometimes enlarged and painful, cheeks swollen, inflammation extensive, ending in the formation of

abscesses in the tonsils and adjacent parts, tonsils sometimes so much enlarged as to interfere very much with the breathing, finally gathering and breaking. To examine the throat well, the head should be thrown back, the mouth widely opened, and the root of the tongue depressed by the handle of a spoon. By this means the whole interior of the throat is brought into view.

Sometimes repeated attacks of Quinsy will leave the tonsils permanently enlarged, in which case, if remedies do not relieve, they must be cut out by a surgeon.

Aconite and Belladonna—These are generally the most appropriate remedies with which to commence treatment, particularly if the following symptoms are present: Violent fever, pulse full and bounding, great heat, thirst, restlessness, constant desire to swallow, the swallowing producing spasms in the throat, which forces liquids out through the nose—burning or pricking sensation and dryness of the throat, pains shooting into the tonsils and ears, swelling on the outside of the throat, profuse salivation, face red and swollen, skin hot and dry, thirst, putrid and bitter taste in the mouth.

Mercurius—Putrid and offensive odor from the mouth; mouth dry and filled with tough saliva, palate elongated and red, tonsils red, dark, inflamed and enlarged, violent throbbing of the throat and ears, extending to the neck, especially during the swallowing, profuse discharge of saliva, chills in the evening and heat followed by perspiration, glands of the neck painful on motion of the jaws or on swallowing, loss of appetite and disgust at food, putrid and coppery taste in the mouth.

Bryonia—Shooting sensations, with dryness of the throat and difficulty of speech, hoarseness, oppressive breathing, breaking and painful sensation of the throat, swallowing painful, some fever either with or without thirst, chilliness, pains in the limbs, and back of the head. This may be given in alternation with Rhus.

Chamomilla—Especially when the disease is caused by taking cold or exposure to a draught of air while perspiring, swelling of the tonsils, hacking cough, flushed cheeks, or one cheek flushed and the other pale, fever

in the evening, with flashes of heat, the glands of the neck under the chin, and tonsils being much swollen.

Lachesis—This has been proved a very useful remedy when Mercury and Belladonna have been used without effect, and especially when the following symptoms are present: Swelling and redness with a feeling of rawness of the tonsils and palate, dryness of the throat, constant disposition to swallow, sensation as of a tumor or lump in the throat, worse in the afternoon and morning, after sleeping, or on very slight pressure on the neck, small ulcers on the throat, and on the left tonsil.

Hepar Sulphur—In cases where the abscesses in the tonsils threaten to break, this remedy will hasten the process; may be given in the beginning of the disease when there are lancinating pains in the throat, in alternation with Mercurius.

Nux Vomica—It may be given when Chamomilla does not relieve, and also when there is soreness, with a feeling of rawness, as if the throat had been scraped.

Pulsatilla—Suits frequently in the case of females or persons of mild character, when the throat feels swollen inside, with tonsils and palate of a dark red appearance, shooting pains in the throat toward the ear when swallowing, patient feels chilly toward evening, the chill being followed by heat.

Nitric Acid—Suitable after Mercury has been given or in alternation with it, when the throat is filled with small ulcerations, with a whitish appearance, and of a fetid smell.

Capsicum—In cases where Nux Vomica seems to be indicated but does not relieve, and when there are burning and roughness in the throat, with a feeling of stiffness and contraction, together with running of the nose and eyes.

The application of cold water will be found excellent, used in the following manner: In the evening when going to bed, place on the throat a wet bandage, covered with a dry cloth, keeping the bandage on during the day, and changing it frequently.

In cases of persons subject to Quinsy, sponging the throat and breast with cold water every morning, will prevent or modify the attacks.

Administration of Remedies—Of the selected remedy dissolve twelve globules in twelve teaspoonfuls of water and give a teaspoonful of the solution every one, two or three hours. If swallowing is difficult and very painful, a dose of three globules may be given dry upon the tongue.

GRIPING COLIC

The term colic is applied to almost any severe pain in the bowels. There is a peculiar twisting or racking sensation behind the navel, accompanied with constipation of the bowels, and sometimes nausea and vomiting; the pain is relieved by pressure, with intervals of ease; the belly is hard, and drawn up in lumps and knots, and distended with wind. It may be known from inflammation of the bowels by the fact of pressure affording relief; the absence of fever, and the occasional absence of pain. It may be divided into three varieties. The common or flatulent colic, bilious colic, painter's colic.

The symptoms of flatulent colic are frequent belching up of wind without relief, violent pain, with a sense of twisting or griping about the navel; pain not increased on pressure; occasionally disappearing to be renewed in a short time; feeling of fullness in the abdomen with constipation; rumbling; nausea; coldness of the stomach.

Causes—Indigestible food, wind, over distension of the stomach by articles of diet which give rise to gases, constipation, exposure to cold, etc.

Bilious colic is sometimes confounded with flatulent colic, but is a more violent and alarming disease. The patient generally before an attack complains of derangement of the stomach and bowels, constipation, loss of appetite, coated tongue, bitter taste in the mouth, nausea, vomiting; as the disease advances, the pain comes on and is of a cutting and screwing character, sometimes commencing in the region of the stomach and extending to the back, or at other times it attacks the bowels, twisting around the navel as in common colic. The pain at first is relieved by pressure, and afterward the bowels are tender to the touch; the extremities

cold, with a yellowish hue of the skin, and of the whites of the eyes, restlessness.

Causes—Bilious colic may be caused by a neuralgic affection of the stomach, exposure to cold, the transferring of rheumatism or neuralgia to the stomach or bowels, constipation, etc.

Painter's or lead colic, is a disease caused by lead, and is found among those who work in lead, as painters, plumbers, miners, type founders, etc. The colic comes on gradually, being preceded with a feeling of general depression, despondency, wandering pains in the bowels and extremities, heaviness of the limbs, derangement of the stomach and bowels; chilliness; depression of spirits; uneasy sensation at the pit of the stomach; this sensation gradually increases until it becomes excruciating, and extends down into the bowels, and is very severe and twisting in its character, nausea, vomiting, constipation, headache, great thirst, pains in the wrists and ankles; the pain is not increased by pressure; the muscles of the abdomen, however, are tender to the touch, sometimes so much so that the patient cannot bear the weight of bedclothes; sometimes accompanying or following the attack we have paralysis, particularly of the muscles of the forearm.

Treatment—The patient should be placed in a warm bath, seated in a tub, and covered with a blanket to confine the hot steam. After being in the bath for about ten minutes, he should lie down in the blankets without being wiped, and covered with sufficient clothing; hot bricks, or bottles of hot water should be placed around the patient, especially on the spots where the pain is most severe. As soon as perspiration occurs, the patient will be relieved. The medicines may be given from the commencement of the attack. The different forms of colic, with the remedies applicable to each, are here given:

Bilious colic: Nux Vomica, Colocynth, Chamomilla, Bryonia.

Common, or flatulent colic: Pulsatilla, China, Cocculus, Nux Vomica, Colocynth, Sulphur, Carbo Veg.

Painter's or lead colic: Opium, Platina, Belladonna.

Colic from worms: Mercury, China, Sulphur.

Colic from indigestion: Pulsatilla, China, Bryonia, Belladonna, Carbo Veg., Nux Vomica.

Colic from a chill: Aconite, Colocynth, Mercurius, Nux Vomica, Chamomilla.

Colic with obstinate constipation: Nux Vomica, Opium.

Colic from bathing: Nux Vomica.

Colic from exposure to cold, damp weather: Pulsatilla, Rhus, Bryonia.

Colic occurring in children: Chamomilla, Rheum, Coffea, Belladonna and Aconite.

Colic occurring in pregnant women: Nux Vomica, Bryonia, Pulsatilla, Sepia and Chamomilla.

Colic in hysterical women: Ignatia, Nux Vomica, Cocculus.

Detail of Symptoms—Colocynth—This is the principal remedy for all kinds of colic. The pains are cutting and pinching, or as if the bowels were cut with knives. Cramps in the limbs, shivering, abdomen swollen, or else very empty and tender, as if from a bruise. Chamomilla, Mercury and Belladonna, may be given after this.

Nux Vomica—Constipation, with pressure in the abdomen, the pain is pinching and drawing, pressure at the pit of the stomach with swelling and tenderness of the abdomen when touched, griping in the abdomen, with cold hands and feet.

Belladonna—Pain, as if the bowels were grasped by the finger nails, relieved by pressing upon the bowels, or upon doubling, a feeling of bearing down as if something would fall out, head and face hot and red, severe pain in the head rendered worse by movement, throat dry. May be followed by Mercury or Hyoscyamus.

China—Excessive swelling of the abdomen with fullness and pressure, as from hard bodies; pain with stoppage of wind, worse at night.

Pulsatilla—Shooting, biting pains in the pit of the stomach, a feeling of heaviness and fulness in the abdomen with tenderness and pain as from a bruise, colic caused by indigestion, worse when sitting or lying, or in the evening, with shivering, patient feels better out of doors, has diarrhœa, pale face. May be followed by China, Mercury, Lycopodium

Cocculus—Particularly useful in common or flatulent colic, and for colics of women, before and at the time of their menses; the pains are spasmodic and constrictive, with nausea; difficulty of breathing; full, distended stomach; or a feeling of emptiness in the abdomen, with squeezing and tearing in the stomach.

Coffea—Great pain with agitation and grinding of teeth, coldness of the limbs.

Ignatia—Colic in the night, with shooting in the sides and chest, relieved by discharge of wind; suitable for sensitive and delicate women.

Bryonia—Fullness and pressure in the abdomen after eating; cutting pain in the bowels, especially after drinking warm milk; colic with diarrhœa, after taking cold; or in the heat of summer.

Chamomilla—Tearing pain with great restlessness; bitter vomiting; fullness in the pit of the stomach; one cheek red, and the other pale; the colic appears generally at night, or after a meal.

Rhus—Pressure in the pit of the stomach; pain in the abdomen at night; diarrhœa of slimy and watery substances.

Carbo Veg.—Swelling and fullness of the abdomen; belching up of wind; colic after riding in a carriage; colic with rumbling in the bowels; discharge of wind with a putrid smell.

Arsenic—Great pain with uneasy, burning sensation, or sensation of cold in the abdomen; pains worse at night, or after eating or drinking; vomiting of watery or bilious matter; diarrhœa with thirst, shivering, and great weakness.

Veratrum—Pain as if from cutting with knives in the abdomen; burning in the abdomen; rumbling of wind. May be given in alternation with Arsenic, in severe cases.

Opium—Abdomen hard and swollen; obstinate constipation with vomiting of substance from the bowels.

Lachesis—In spasmodic colic, especially when Colocynth, Belladonna, Nux Vomica and Chamomilla have been given without effect.

Lycopodium—Swelling and fullness of the stomach, with pain; rumbling of wind. May follow Pulsatilla or Lachesis.

Platina—When the colic is in consequence of fear or anger; or when caused by lead; the patient is afraid of dying; contracting pains in the abdomen; pressure in the stomach after eating; the colic disappears when the distress of mind begins, or the distress of mind disappears as the colic begins.

Aconite—Great tenderness of the abdomen; restlessness and twisting; bowels seem to retract; desire to urinate, with unsuccessful attempt.

Arnica—Bruised pains in the sides of the abdomen; fullness in the stomach, as if one had eaten too much; stitches in the pit of the stomach; oppression on the chest, worse after eating and drinking, or on touch; swelling and hardness of the abdomen.

Cina—Colic from worms, with pain, especially around the navel.

Mercury—Shooting, or violent contracting pains in the pit of the stomach, with nausea; frequent desire to evacuate; great quantity of saliva in the mouth; abdomen tender to the touch; shivering with heat, especially in the face; pain worse at night.

Rheum—For colic, particularly in infants, when accompanied by diarrhœa with a sour smell; or in adults when the pains are cutting, forcing one to bend over frequently, pain worse when standing.

Sepia—Colic in pregnant woman, cutting pains after motion, burning and stitches in the abdomen, which is hard and swollen, sensation of bearing down in the abdomen, with pressure.

Calcarea Carb—Gnawing or cutting pain in the abdomen, uneasy rumbling in the bowels with a difficult discharge of wind, acidity of the stomach, with vomiting of food, diarrhœa of a light color.

Administration of Remedies—Dissolve twelve globules of the selected remedy in twelve teaspoonfuls of water, and give a teaspoonful every ten, fifteen, twenty or thirty minutes, according to the severity of the symptoms. Each remedy should be repeated three or four times before changing to another. The intervals should be lengthened as the patient grows better.

Persons liable to colic should be careful in regard to their diet, avoiding all green vegetables, acid drinks, etc. During an attack only the

slightest nourishment should be given, as toast water, gruels, etc. The feet should be kept warm and dry.

INFLAMMATION OF THE STOMACH

Gastritis is an inflammation of the lining membrane of the stomach, and may be either acute or chronic. The acute form, however, is a rare disease, and is generally caused by acid and corrosive substances taken into the stomach; as arsenic, corrosive sublimate, nitric acid, and the habitual use of liquor. Blows upon the stomach, and sudden checking of perspiration may also excite it.

Symptoms—In severe cases, there is a burning pain in the stomach, with thirst; restlessness; constant nausea and vomiting; great desire for cold drinks; anxiety; prostration of strength; pain increased by pressure upon and by substances taken into, the stomach; the thirst is intense and distressing, for fluids unless given in very small quantities are immediately rejected; there is sometimes a severe cough which is very annoying; the tongue is either red on the tip and edges, and whitish in the middle, or is red all over; the bowels are constipated unless the inflammation extends to them, when we have diarrhœa.

As the disease increases in violence, we have great difficulty of breathing, and pain, which increases by inspiration; great loss of strength; hiccough; cold, clammy sweats; skin becomes pale and cool; the tongue becomes smooth, red and dry; vomiting of dark-colored matter; delirium, stupor, or convulsions and death.

Chronic inflammation of the stomach is quite a common disease, and is frequently mistaken for dyspepsia. It may be caused by the acute form, but it more frequently follows attacks of fever, as scarlet fever, small pox, etc.

There is pain in the stomach which is increased by the presence of food, or by pressure, the appetite is irregular and fastidious; the food is imperfectly digested, and gas which is exceedingly offensive, escapes by the mouth; the appetite will sometimes be very craving, but when the patient takes food, he is easily satisfied, or is made sick.

At other times the appetite is entirely lost; tongue is white in the center, and red at the sides and tip; sometimes smooth and red all over like beef; if the inflammation extends to the bowels there will be diarrhœa; in some cases cough is present, and if the disease is allowed to continue, all the symptoms of consumption appear. The disease, unless well managed, is liable to cause ulceration of the coating of the stomach, and death.

The principal remedy in this disease is Arsenic, to be given especially when the following symptoms are present: The countenance sunken and contracted, stomach swollen and hot to the touch, the patient lies upon the back, breath short, rapid and difficult, tongue red and clean, or red on the edges with dirty fur in the center, voice hoarse and suppressed, skin hot and dry, burning or shooting pain in the stomach, griping or burning pain in the throat, great desire for cold drinks, obstinate nausea and vomiting, great tenderness over the region of the stomach on pressure. This may be given in alternation with Veratrum.

Aconite—Especially when the pains are severe and the heat is great in the stomach, or when the disease is caused by taking cold drinks when overheated.

Veratrum—Countenance pale and sunken, nose pointed, lips dry and bluish, tongue red at the tip and edges, with a dark, dry fur running through the center, pulse quick and weak, extremities cold, hiccough, great exhaustion, burning pain in the stomach, short and troublesome cough.

Ipecac—May be given after Aconite if the vomiting is very great, and the disease is caused by indigestion.

Pulsatilla—May be given after Ipecac when the disease is caused by indigestion, or a chill in the stomach from having taken ice.

Belladonna and Hyoscyamus—May be given in alternation (turn about) when the patient is nervous, and there is drowsiness, delirium and loss of consciousness.

Nux Vomica and Lachesis—May be given in alternation or alone when the disease is caused by liquors, or by the abuse of coffee, wines, or stimulating food.

Opium and Camphor—May be given in alternation (turn about) if the above remedies do not seem to relieve the case, and there is drowsiness and stupor.

Cantharis—May be given in violent cases, particularly when the burning pain is intolerable.

For chronic gastritis, the following remedies may be used:

Bismuth, Bryonia, Cuprum, Metallicum, Digitalis, Hyoscyamus, Phosphorus, Mercury, Ignatia, Tartar Emetic. The diet should be the same as under allopathic treatment.

Administration of Remedies—Dissolve twelve globules in twelve teaspoonfuls of water and give a teaspoontul every half hour, hour, or two hours, until better. If, however, the symptoms do not improve after a few doses, then at once select another remedy and give in the same manner. For the chronic form, the remedies may be given two or three times a day.

INFLAMMATION OF THE BOWELS

This is one of the most dangerous and painful diseases, and should always be placed in the care of a physician. It is an inflammation of the lining membrane of the small intestine. An inflammation of the lining membrane of the large intestine is called dysentery.

Symptoms—The disease commences with a slight chill accompanied by thirst, with hot skin, and more or less pain of a griping character, in the neighborhood of the bowels, which gradually increases until it is of a severe burning character. The pain is increased on pressure, so much so that the patient is unable to bear even the weight of the bedclothes, and lies usually on his back with the knees drawn up. The pain sometimes comes on in paroxysms with intervals of relief; nausea and vomiting are present, with fever, tongue furred and red; thirst; constipation; difficult and painful urination; vomiting may be so violent that the contents of the intestines may be thrown up; sometimes, instead of constipation, there will be diarrhœa, the discharges being either watery or mucus tinged with blood, or perhaps bilious. In bad cases as the disease advances. the belly becomes swollen, the pain increases, the pulse becomes weak and flutter-

ing; hiccough occurs; the limbs grow cold, and the features are pinched and sharp; the pain ceases, and a discharge of black, fetid fluid occurs, and death soon follows from mortification.

Inflammation of the bowels may be mistaken for colic, or for inflammation of the peritoneum. It may be distinguished from colic by the fever symptoms which occur in inflammation of the bowels, and the pain on pressure, neither of which are found in colic. It may be distinguished from inflammation of the peritoneum, by the fact that diarrhœa is seldom present in the latter affection, and that swelling of the abdomen with tenderness on pressure are always present in inflammation of the peritoneum.

Causes—Irritating and indigestible food; colic; exposure to cold; obstinate constipation; strangulated hernia or rupture; may also be caused by the driving in of eruptions, or the suppression of customary discharges.

The treatment of this disease is similar to that for inflammation of the stomach. Aconite should be the first used, and continued as long as the fever is intense, and the skin very hot. After this Arsenicum and Veratrum should be given alternately (turn about). If the vomiting is violent and persistent, after having used these remedies for a considerable length of time, give Ipecac. In some cases Belladonna and Mercury may be given in alternation after the Aconite has reduced the fever, but there is still great soreness of the abdomen, with intense thirst. When the vomiting is so severe as to throw up the contents of the bowels, Opium must be given, and if not relieved within eight or ten hours, give Plumbum. At this stage, weak injections of an infusion of tobacco will sometimes be of benefit. A warm bath may also be administered with success.

Administration of Remedies—Of the selected remedy dissolve twelve globules in twelve teaspoonfuls of water and give a teaspoonful every one, two, three or four hours, according to the severity of the symptoms. If the pellets are used give six at a dose. The diet should be of the mildest description, as gruel made of rice or flour; milk and water; milk toast and gum arabic water.

WORMS

There are three principal varieties of worms to which the human race is subject. The Ascaris or Pin Worm, also called the maw or thread worm; it is very small, resembling a white thread, from half an inch to an inch in length. The number is sometimes very great, forming rolls and balls in the intestines. They frequently crawl into the vagina, or urethra, causing a troublesome itching.

Another variety is the Lumbricus, or Ascaris Lumbricoides, which is a very long, round worm, about an eighth of an inch in thickness, and from three to twelve inches in length; it very much resembles the common earth worm. They are found generally in the large intestines and sometimes in the stomach, and not infrequently make their appearance in the throat.

The third variety is the Taenia Solium, which is a long, flat tapeworm, varying in length from a few feet to several hundred. It dwells in the small intestines, and feeds on the chyle which is the substance of the food after it has passed through the stomach, and in this way causes great emaciation, exhaustion and loss of flesh.

Symptoms—The symptoms of the presence of worms are very obscure, and it is sometimes impossible to check them until they have been discharged.

The presence of the thread worm may be known by the annoying and intolerable itching within the anus or fundament. In children, worms are indicated by paleness, itching in the nose, grinding of the teeth; starting from sleep, irregular appetite, bad breath, swollen belly, upper lip considerably swollen; one of the cheeks more or less flushed.

Tapeworm may be known by a gnawing pain in the stomach, irregular appetite, but which is generally voracious, the amount eaten does not furnish a corresponding amount of nourishment; the patient grows thin, and there is frequently a hard cough present; a sensation as of something suddenly rising from the left side into the throat and falling back; dizziness particularly in the morning before eating.

Treatment—Aconite—Given at the commencement of the treatment for nervous irritability, which is generally present. A few doses may be given and repeated every two hours. If this is not effectual, give Ignatia in the same manner.

Cina—This is the principal remedy, especially when the following symptoms are present: Boring with the fingers in the nose; the child is nervous, and cries at night in his sleep; has severe attacks of colic; picking the lips; face sometimes pale and cold, at others red and hot; capricious appetite; cross and fretful; face bloated; swelling and pain in the abdomen; constipation or diarrhœa; grating of the teeth.

Nux Vomica—When with the other symptoms there is constipation, severe itching, burning and pricking sensation at the anus.

Spigelia—In severe cases of worm colic when there is fever and diarrhœa, with craving appetite and chilliness.

Silicea—Especially for children who are of scrofulous habit.

Belladonna—Colic which is relieved by lying on the bowels, starting in sleep, headache.

Lycopodium—Especially when there is great itching at the fundament or anus.

Teuerium—Is recommended by Freligh for the irritation and itching caused by worms.

Santonin—Is an excellent remedy for the different varieties of worms.

For the tapeworm, pumpkin seeds given as follows, will be found effectual:

Take eight ounces of the seeds, and eat at night four ounces on an empty stomach; then in the morning take the other four ounces, having steeped them in hot water, and drink the infusion. Nothing should be eaten until noon. This will generally suffice to expel the worm. If not effectual, repeat the next night.

Administration of Remedies—Give a dose of the selected remedy, three times a day unless the symptoms are urgent, when it should be repeated every two or three hours.

In chronic cases, the remedy should be repeated once a day and continued for a long time.

Diet—The patient should avoid all heavy food, such as boiled vegetables, rich pudding and cake; but he may be allowed meat soups, roasted or boiled meat, and milk.

For the intense itching which is present in some cases, injections of cold water, or water to which has been added a little salt or vinegar, will be found beneficial. Sweet oil will sometimes answer the purpose.

CONSTIPATION

This is one of the most common disorders to which mankind is subject. For the symptoms, causes and general treatment, see page 80.

The principal remedy is Nux Vomica, when there is frequent and ineffectual urging to stool, or a feeling as if the anus was closed; disagreeable taste in the mouth; loss of appetite; swelling of the abdomen. If the Nux is insufficient, give an occasional dose of Bryonia, especially if the disorder occurs in warm weather.

Opium—May be sometimes given in alternation with Nux Vomica, especially when there is great torpidity of the bowels, and without any desire to stool; redness of the face; rush of blood to the head; headache.

Platina—When the feces are voided in small, hard lumps, with much difficulty; shuddering; sensation of weakness in the abdomen.

Lycopodium—When there is a painful urging, with a severe bearing down, but inability to pass the feces.

Antimonium Crudum—In cases where constipation and diarrhœa alternate.

Sulphur—For long continued constipation, particularly where the patient is troubled with piles. Also when there is frequent desire to stool, but without any result.

Plumbum—For obstinate constipation, the stools are hard and difficult, and the feces come away in hard lumps or balls.

For constipation of pregnant women, give Nux Vomica, Opium,

Sepia. For lying-in women, Bryonia, Nux Vomica. For nursing infants, Bryonia, Nux Vomica, Opium, Sulphur.

Administration of Remedies—Give of the selected remedy a dose once in two, three or four hours. When the remedy is given dry, from three to six pills at a dose. When given in water, dissolve six globules in six teaspoonfuls of water, and give one teaspoonful for a dose. Injections of, and bathing in, cold water, will be found very beneficial.

DIARRHŒA

This disease is of frequent occurrence, especially during the warm months of the year.

The symptoms are, frequent discharges from the bowels of a more or less fluid character, each discharge being preceded by a rumbling noise in the bowels, together with a sense of heaviness or weight; there is generally more or less griping, and sometimes nausea and vomiting; when the discharges are frequent or in large quantities, the strength of the patient is rapidly reduced.

Causes—Exposure to extreme heat and cold; the use of acids; indigestible or other irritating food; overloading the stomach with food; violent mental emotions, such as fear, anger, etc. It may also be caused by too close confinement in ill ventilated habitations, and also by teething, in infants.

General Treatment—The use of all food that is not perfectly easy of digestion should be forbidden, as well as acids, coffee, and all highly seasoned vegetables, fruits, fresh meats, and soups of all kinds. The patient may be allowed toast, rice, boiled milk, oatmeal, hominy, arrowroot, barley water, sago, tapioca and gum arabic water; boiled rice flavored with cinnamon may also be allowed.

Dulcamara—For diarrhœa which is caused by cold; when the evacuations are watery, greenish, or yellowish; worse at night with slight pain. It may be followed by Bryonia.

Aloes—Violent stools; the whole body becoming hot during evacua-

tion, with a feeling of sickness at the stomach, or in the region of the liver, the evacuations have a very putrid smell, and are not very profuse or watery.

Ipecac—Evacuations of thin mucus, or frothy, fermented or yellow stools, with considerable pain in the rectum; stools with a white substance scattered through; paleness of the face; great prostration.

Chamomilla—Bilious, watery or slimy diarrhœa, the evacuations resembling chopped straw, and smell like rotten eggs; coated tongue; swelling of the bowels; bitter taste in the mouth. Particularly useful when diarrhœa is caused by cold, fear or anger, and for diarrhœa of infants, when the child tosses up its legs, frets, worries and tosses about, and wants to be carried.

Rheum—Sour smelling evacuations, with contractive colic in the bowels; shuddering when evacuating; diarrhœa from acidity of the stomach; sour smell proceeding from the child which is not removed by washing. Especially useful in diarrhœa of infants and diarrhœa of lying-in women. If Rheum does not relieve, give Chamomilla.

Mercurius—Suitable for almost any diarrhœa; especially when accompanied with griping in the bowels before, and burning in the anus after stool; great prostration and trembling; evacuations bilious, slimy or frothy or mixed with blood; violent colic; bad breath. Nux Vomica will sometimes relieve when Mercury seems indicated, but does not have the desired effect.

Colocynth—Bilious or watery diarrhœa, with severe cramp-like pains.

Podophyllin—Diarrhœa with cramp-like pains in the bowels; light colored and offensive stools; evacuations frothy and slimy.

Pulsatilla—Diarrhœa from indigestion, with watery, offensive evacuations, particularly at night, bitter taste in the mouth; foul tongue.

Bryonia—Diarrhœa from heat of summer.

Arsenic—Evacuations burning, with severe colic pains. May be given in alternation with Veratrum, or in alternation with Carbo Veg. when the diarrhœa is putrid, and consists of undigested matter; or watery, slimy, burning evacuations.

Magnesia—Diarrhœa with evacuations resembling the scum of a frog pond, green and frothy.

Nux Vomica—When there are frequent and scanty evacuations of watery and greenish substances, accompanied with much straining and pressing down pain. May be given sometimes in alternation with Mercury.

Administration of Remedies—Of the remedy selected, dissolve twelve globules in twelve teaspoonfuls of water, and give a teaspoonful every half hour, hour, two, or three hours, according to the severity of the pain, and the frequency of the evacuations. If the pills are used, give three or four at a dose. In chronic cases give a dose every morning and evening.

DYSENTERY

This is an inflammation of the mucous membrane lining the large bowels.

Symptoms—The disease commences generally with a loss of appetite; constipation; shivering; heat of skin; excessive thirst, etc. It sometimes begins with diarrhœa; the passages are small and frequent, and are composed of mucus streaked with blood; there is constant straining, and desire for stool, with severe pain, before and after each evacuation; there is painful griping of the anus called tenesmus.

Causes—Sudden change in the temperature from hot to cold; unripe or sour fruits; stale vegetables, or meat; drinking cold water when heated.

General Treatment—The patient should not be allowed to sit up, but be kept very quiet. For food, use flour porridge well boiled, rice water, arrowroot, sago. When recovering, a little mutton broth may be allowed.

Aconite—Pain in the bowels; bilious, or thin, watery evacuations, mixed with mucus and sometimes streaked with blood; pains in the head, neck and shoulders; pulse strong and fast.

Arsenicum—Suitable for cases where the stools pass involuntarily, and have a putrid smell; the patient is very weak; burning pain in the bowels;

breath cold. May be given either alone, or in alternation with Carbo Veg.

Belladonna—When Aconite fails to relieve, and when there is dryness in the mouth and throat; tenderness of the bowels; tongue coated and red at the tip.

Mercury—This is the most important remedy in dysentery, and is useful in all stages, particularly when there is violent straining before and after evacuations, as if the bowels would force themselves out; a discharge of light blood sometimes streaked with mucus, or greenish matter, after much straining, sometimes the evacuations resemble scrambled eggs; violent colic; nausea; shivering; exhaustion; trembling; cold perspiration of the face; aggravation of pain at night. May be given in alternation with Colocynth, when there are severe griping colic pains, or in alternation with Aconite or Belladonna if there is fever.

Chamomilla—Sometimes useful after Aconite, when there is still fever with headache, coated tongue, nausea and thirst. Especially useful when the attack is caused by suddenly checked perspiration.

Colocynth—When there is severe pain in the bowels and the discharges are mixed with green matter, or else are slimy and mixed with mucus and blood. May be given in alternation with Mercury.

Podophyllin—Cramp-like pains in the bowels; stools light colored and very offensive, or frothy and mucus.

Ipecac—Especially of benefit when the disease occurs in the fall, or when the mucus or slimy passages are afterward streaked with blood. May be given with advantage in alternation with Petroleum.

Nux Vomica—Small and frequent discharges of bloody slime; intense heat; great thirst; burning, cutting pain about the navel. May be given in alternation with Opium.

Sulphur—Useful in obstinate cases; an occasional dose.

Administration of Remedies—Dissolve twelve globules in twelve teaspoonfuls of water and give a teaspoonful every half hour, hour, or two hours, according to the urgency of the symptoms. As the patient grows better, increase the intervals between the doses.

For chronic dysentery, a dose of the remedy three times a day is sufficient.

CHOLERA MORBUS

This is a disease common to warm climates, and is characterized by vomiting, purging, violent gripings, coldness and cramps of the extremities.

Symptoms—The attack generally comes on suddenly with vomiting and purging, accompanied by severe griping pains in the bowels and stomach, followed by great anxiety. The discharges from the bowels consist of feces, afterward of watery, bilious matter; each evacuation is preceded and accompanied with violent griping and cutting colicky pains, especially about the navel; during the intervals between the evacuations, there is nausea and uneasiness at the stomach; generally there is great thirst, and fluid is vomited as soon as swallowed; if the disease is allowed to progress, the spasms extend to the arms and hands, the extremities become cold, the pulse sinks, countenance is pale, eyes sunken, cold, clammy sweat breaks out, and death occurs.

Causes—Heat of summer, especially when the days are hot and evenings cool, sudden changes in the atmosphere, improper substances taken into the stomach, as unripe fruits, acids, lobsters, melons, cucumbers; fits of anger.

Ipecac—Especially when the vomiting is violent. May be given at the commencement of an attack in alternation with Veratrum. If there is severe pain in the bowels, frequent and small evacuations, with severe pressing down pain, give Nux Vomica in alternation with Ipecac.

Arsenicum—Violent diarrhœa of watery, bilious, slimy, greenish or blackish substance; great prostration; cold extremities; violent thirst; tongue and lips dry and cracked, and bluish; burning sensation at the pit of the stomach. May be given in alternation with Veratrum.

Veratrum—For the same symptoms as Arsenic, together with cramps in the calves of the legs; pale countenance, very great prostration, shriveled appearance of the skin.

Colocynth—Violent colic, as if the bowels were jammed between two

stones; vomiting of green substance; cramp-like pain; constrictions in the bowels with cutting pains as from a knife.

Cuprum—When there are severe spasms of the limbs; cramps in the fingers and toes.

China—When the attack is caused by indigestion; also for the debility after a severe attack.

Administration of Remedies—Of the selected remedy dissolve twelve globules in twelve teaspoonfuls of water, and give a teaspoonful every ten, fifteen or thirty minutes, according to the severity of the attack. After having given several doses, and there is no relief, select another remedy. The intervals between the doses should be lengthened as the patient grows easier. The diet may consist of such things as oatmeal gruel. Cold water should be used as a drink. The patient should be careful to avoid all vegetables and other articles which will disagree with his stomach.

CHAPTER XXXIII

HOME TREATMENT---DISEASES OF PREGNANCY

MORNING Sickness—This is a most troublesome disorder, and one difficult to control. It sets in generally early in the beginning of pregnancy, and continues until after the third month. The attacks usually come on early in the morning, and last but a short time.

General Treatment—It may sometimes be avoided by the patient taking a cup of coffee and a little toast, in bed, before she arises for the day. Lemonade, sardines, or smoked herring, will sometimes alleviate.

Ipecac—Bilious vomiting; nausea and vomiting, with uneasiness in the stomach; vomiting of undigested food; bowels loose.

Tabacum—This is a very important remedy, where there is nausea, with faintness, and deathly paleness of the face, relieved by being in the open air; vomiting of water, and acid liquid and mucus.

Arsenicum—Excessive vomiting after eating and drinking, with fainting and great weakness.

Nux Vomica—Nausea and vomiting in the morning; acid and bitter substances arise in the throat; heartburn; constipation.

Sepia—If the nausea has lasted for a long time, and appears generally in the morning; in the evening there is a painful sensation of uneasiness in the stomach, with burning and stinging in the pit of the stomach.

Camphor—When there is cold perspiration with hot head and cold feet.

Pulsatilla—When Ipecac and Nux Vomica have proved insufficient, and especially if the vomiting comes on in the evening, or at night; depraved appetite; longing for beer, acid, wine, etc.; diarrhœa alternating with constipation.

PRURITIS—ITCHING OF THE PRIVATE PARTS

This is a very annoying and troublesome disorder. It is so severe in some cases, as to take away all rest and sleep, and is absolutely unbearable. It is doubtful as to what is the cause of it. It may be occasioned by an unhealthy discharge from the vagina, or it may depend upon an eruption like thrush in infants, when it is accompanied by burning, heat, redness, dryness and swelling. The parts must be kept perfectly clean, and warm water will generally be found the best to use.

Treatment—The best remedy in this trouble is Conium, of which take six globules three times a day. If this dose does not effect a cure, give one of the following remedies, dose the same: Arsenicum, Bryonia, Rhus, Silicea, Pulsatilla, Sulphur, Lycopodium or Graphites. As an application, use an ounce of borax, dissolved in a pint of rose water or rain water. If the itching extends into the vagina, throw in some of the solution with a syringe. A weak infusion of green tea, or a weak solution of alum, will sometimes be found beneficial.

PILES, OR HEMORRHOIDS

This is an affection to which pregnant women are very liable. They are generally caused by constipation. It is very important that a pregnant woman should pay strict attention to her bowels, not allowing either constipation or diarrhœa, and by attending early to these derangements much trouble may be avoided.

General Treatment—When the piles appear, or there seems to be a disposition for them to do so, the free use of cold water will be found very beneficial. It may be used in a sitting bath, cold compresses, or injections. Warm water may be used when they bleed or have ceased to bleed, and are very painful. The diet must be carefully regulated. Meat should be used as little as possible. Some advise a diet of bread and water alone, for a few days. If after each evacuation the bowel, or a small tumor pro-

crudes, causing pain, it may be returned by pressing it back with the ball of the finger. It is not advisable to take much medicine. Try to be regular, and to take regular exercise. The bowels may be kept regular by eating rye bread, rye meal and molasses, potatoes, ripe fruit, stewed peaches, prunes, etc.

Nux Vomica and Sulphur are the principal remedies, Nux Vomica especially, when there is a burning, pricking pain in the tumors; also when there is a discharge of light blood after each evacuation, and a constant desire to evacuate. Give the Nux at night (one dose) and the Sulphur in the morning (one dose). If these do not relieve in a few days, Ignatia may be given, especially if there are violent, stitch-like pains, or when after each evacuation there is a painful contraction and soreness. If the constipation is very violent, give Ignatia and Opium, every two or three hours alternately. Other remedies are Arsenicum, Belladonna, Carbo Veg., Hepar Sulphur, Hamamelis Virginica.

CONSTIPATION DURING PREGNANCY

A sluggish condition of the bowels is one of the annoying troubles of Pregnancy. There are many circumstances to induce it, and it must be carefully guarded against. A change should generally be made in the diet; eat plenty of ripe sweet fruits, such as apples, prunes, peaches, etc.; take plenty of exercise in the open air, and indulge in the moderate use of cold water. Avoid coffee and all stimulating liquids. It is best not to use violent purgatives, as they are liable to produce miscarriage.

Take a dose of Nux Vomica, every night and morning. This remedy may be given in alternation with Opium, if Nux does not have the desired effect. When both these fail, and the constipation has continued for a long time, Lycopodium or Sulphur may be taken. If the bowels feel painful, Bryonia and Ignatia will often prove beneficial.

DIARRHŒA DURING PREGNANCY

This disease does not occur so often during pregnancy as constipation, but is much more injurious, as it rapidly weakens the patient if not

checked. Sometimes there is simply looseness of the bowels, where the movements are more frequent than usual; but the appetite remains good, and the general health is not affected. Such cases may be controlled by simply regulating the diet. The diarrhœa, however, which is to be feared, is when the discharges are dark-colored, liquid, and very offensive; the breath is bad, and there is a disagreeable taste in the mouth; little or no appetite.

General Treatment—The diet should be carefully regulated. It may consist of barley water, Gum Arabic water, Arrowroot, Sago, Tapioca, Iceland or Irish moss, toast water, boiled rice, flavored with powdered cinnamon.

Chamomilla—For violent colic, yellow, greenish stool, or resembling stirred eggs; rumbling in the bowels.

Pulsatilla—When the stools are watery or greenish, preceded by colic, with slimy, bitter taste in the mouth; nausea or vomiting.

Dulcamara—When the diarrhœa is caused by taking cold; worse at night.

Nux Vomica—Evacuations frequent but scanty, accompanied with great straining and pressing-down pain in the rectum.

DYSPEPSIA

This is a frequent and annoying symptom, for which the patient may take Magnesia, Chalk, or Peach kernels.

Nux Vomica and Pulsatilla are the principal remedies. They may be taken either alone or in alternation (turn about). Sometimes a slice of lemon sugared, and kept in the mouth, will relieve; or one drop of Sulphuric Acid in a tumbler of water.

Hysteric Fits—During the early months of pregnancy, are frequent.

Treatment—The patient should be placed in the cold air, and cold water dashed over the face, and Ammonia held to the nostrils. When the paroxysm is over, give a dose of Coffea or Chamomilla.

When the attack is caused by disordered digestion, give Nux Vomica or Pulsatilla.

When it is caused by anger, Chamomilla.

Administration of Remedies—Give six globules at a dose, and repeat every two, three or four hours.

PALPITATION OF THE HEART

This may prove very distressing, especially to delicate women.

When caused by anger, Chamomilla; by fear, Veratrum; by joy, Coffea; by sudden fright, Opium.

For nervous persons, Ignatia, Coffea, Chamomilla.

Other remedies are, Belladonna, Nux Moschata, Pulsatilla.

Administration of Remedies—Of the remedy selected, dissolve twelve globules in twelve teaspoonfuls of water, and take one teaspoonful every hour or oftener, if the severity of the case demands it.

HEADACHE

This is a very common complaint among pregnant women, and there is generally considerable nervous irritability.

Treatment—The remedies are Aconite, Belladonna, Nux Vomica, Opium, Pulsatilla, Platina.

When there is sleeplessness, Coffea, Ignatia, Nux Vomica, Hyoscyamus, Opium.

When there is sleepiness, Opium, Pulsatilla, Nux Vomica, Crocus.

Administration of Remedies—Of the selected remedy, dissolve twelve globules in twelve teaspoonfuls of water, and take a teaspoonful every half hour, hour, two, or three hours, according to the severity of the symptoms.

CRAMPS

Cramps frequently occur in the calves of the legs, hips, back or abdomen, and are very annoying

For cramps in the limbs, Veratrum, Nux Vomica, Colocynth, Chamomilla.

For cramps in the abdomen or stomach, Nux Vomica, Colocynth, Pulsatilla, Belladonna.

For cramps in the back, Ignatia, Rhus.

Administration of Remedies—Of the selected remedy, dissolve twelve globules in twelve teaspoonfuls of water, and give a teaspoonful at a dose: or give six globules.

INCONTINENCE OF URINE—ENURESIS

This is a partial or total inability to retain the urine, and is a very annoying complaint.

The principal remedies are Pulsatilla, Sepia, Belladonna, Hyoscyamus, Causticum. Of the remedy chosen, take six pills once in three or four hours.

DIFFICULT URINATION

This is an exceedingly troublesome complaint, caused by pressure of the enlarged uterus upon the bladder.

Pulsatilla is the principal remedy. If Pulsatilla does not relieve, give Nux Vomica.

Other remedies are Belladonna, Cantharides, Cocculus, Phosphoric Acid.

Of the remedy chosen, take six globules every two hours.

CHAPTER XXXIV

SYMPTOMS AND TREATMENT—DISEASES OF INFANTS

(See Chapter XX.)

CONVULSIONS—Spasms—Fits—Convulsions is a disease whi is probably more dreaded by mothers and nurses than any oth on account of the terrible appearance generally presented by t sufferer, and the suddenness of the attack of the spasms. By the word convulsion we mean, a violent and involuntary contraction of the muscles of the whole or part of the body, and consists in some affection of the spinal system of nerves. Not all convulsions are dangerous, although some are very dangerous, and some even fatal. The ones to be feared the most are those which occur after dropsy of the brain has set in, after severe falls or bruises, or after any acute attack of brain or bowel diseases. They are more likely to occur before the age of seven, especially during the first three years. The brain of an infant is very tender, and consequently is liable to sudden congestions, which it cannot resist so well as the brain of an adult.

Causes—Children of a susceptible, irritable and nervous temperament or disposition, are more liable to them than others. The most common causes are, irritation of the bowels from indigestible food, difficult teething, and worms, excessive crying and pains, anger and joy. A dangerous form results from overloading the stomach with indigestible food, as nuts, apples, etc. Eruptive fevers, as scarlet fever, small pox, and measles, are frequently ushered in by convulsions, but they quickly disappear, on the appearance of the eruption, and are not considered dangerous; if, however, they make their appearance during the course of the disease, they are greatly to be dreaded. Spasms have been produced by the milk of the mother becoming poisoned by some great mental emotion, as anger, also by her nursing the child when overheated.

Symptoms—"The attack generally commences in the eyes, which

are at first fixed in one position, staring; but as the case advances, they become agitated, and are turned up beneath the upper eyelid, leaving only the whites visible; the eyelids are sometimes open, sometimes shut; the eyes are frequently crossed; the pupils may be either contracted or dilated. The muscles of the face next become affected, and the contractions produce at times most horrid contortions; the mouth is distorted into various shapes. Sometimes the jaws are firmly set, again they are in violent motion. At times, but rarely, there is foaming at the mouth. In severe cases, when the spasm becomes general, the whole body is violently convulsed; the head is drawn backward, or to either side; the body may become stiff and rigid, or variously contorted; the fingers are drawn into the palms of the hands; the arms are thrown backward or forward, or jerked and drawn into all conceivable positions. The lower extremities are likewise affected, but not generally in so violent a manner." A fit may last but for a few moments, or it may continue for several hours. A child will sometimes have several fits during the day, but there will always be a longer or shorter interval between each spasm.

General Treatment—The first thing to be done, is to prepare a warm bath and put the child in as soon as possible. Where the convulsion is slight, a foot bath with a little mustard in the water is sufficient, but in other cases the bath must be a general one. Pour cold water in a steady stream on the head of the child while in the bath, and continue it so long as the head is at all hot, or until the fit passes off. When taken from the bath, he may be wrapped in a warm flannel, or woolen blanket; do not even stop to wipe him off. He must be kept in the water from ten to twenty minutes, or until the convulsion ceases. If the patient does not improve under this means, give an injection of tepid water, with which may be mixed a tablespoonful of sweet oil, and a little Castile soapsuds; repeat this as often as may be necessary to produce an evacuation of the bowels.

CONVULSIONS

Place the child in a warm bath. If the convulsion has been caused by overloading the stomach, give an emetic of tepid water at once; its oper-

ation may be hastened by tickling the throat with the feathered end of a quill. The remedies to be given are as follows:

Nux Vomica—If there has been constipation, colic; spasms are violent, and attended with shrieks; jerking backward of the head; the eyes are set. Pulsatilla may be given in alternation.

Veratrum—If the child is pale and cold; sweat on the forehead.

Ipecac—If there are attempts at vomiting.

If the spasms are caused by teething, and the gums are red and swollen, cut them with a sharp penknife. Belladonna and Coffea may be given in alternation, every ten or fifteen minutes. If there is much fever, give Aconite, especially if there is great restlessness, crying and starting. Give Chamomilla, if the muscles of the eyes and face twitch convulsively; rolling of the head from side to side; one cheek red and the other pale. Belladonna may be given in alternation, when Chamomilla alone fails.

Cina—If convulsions are caused by worms, and there are spasms of the chest, with stiffness of the entire body. May follow Mercurius, or be given in alternation with it.

Ignatia—When the patient starts suddenly from sleep, with violent crying and shrieks.

Hyoscyamus—For sudden attacks after eating; the child gives a shriek, and becomes insensible; twitching of the muscles of the face; foaming at the mouth, and great wildness.

If convulsions appear in the beginning of eruptive fevers as measles, scarlet fever, or small pox, give Coffea and Aconite. After these Bryonia and Belladonna, which will generally bring out the eruption.

If the convulsion appears during the course of a fever, give Belladonna if in scarlet fever; Bryonia if in measles. If these do not relieve, give Cuprum in alternation with Belladonna. If not better in two hours, give Stramonium and Cuprum. Convulsions from fright require Opium, especially if there is trembling over the whole body; the child lies as if stunned; breathes heavily like snoring; face almost blue. If the Opium fails, give Stramonium or Ignatia. Hyoscyamus, if there is foaming at the mouth

and twitching of the muscles of the face. When convulsions occur from blows, or falls upon the head, give Arnica.

Sometimes convulsions occur from a cold on the lungs being transferred to the head. In such a case, put the child in a warm bath, and apply cold water to the head. Persevere in its use, until the trouble returns to the lungs, which may be known by the difficult breathing, rattling, etc. Internally give Belladonna and Cuprum in alternation, afterward Opium and Camphor.

Administration of Remedies—Of the remedy selected, dissolve twelve globules in twelve teaspoonfuls of water, and give a teaspoonful every ten, fifteen, or twenty minutes, according to the urgency of the symptoms. Lengthen the intervals as the child improves.

DENTITION

The period of teething is one fraught with considerable danger to the infant. Teeth-cutting generally begins between the ages of five and seven months. It is indicated by redness, heat, and tenderness of the gums, and salivation, commonly called "drooling." Sometimes there is watering of the eyes, fever, fretfulness, disturbed sleep. More frequent discharges from the bowels.

General Treatment—When the gums are hot and swollen, and especially if there is a determination of blood to the head, with twitching of the muscles, the gum should be lanced immediately over the tooth; this will generally relieve the symptoms. The child may be allowed to bite upon some hard substance, as an ivory ring.

Aconite—May be given when there is much fever, with restlessness and pain; the child cries and starts.

Belladonna—Especially when the child is nervous, head is hot, face flushed, gums swollen and red, also when convulsions are threatened, the child starts from sleep and stares, the pupils of the eyes are dilated, the body becomes stiff.

Chamomilla—Especially good when the child is uneasy and restless at night, starts at the least noise, twitches and jerks in sleep, redness of

one cheek, moaning and groaning, uneasiness, diarrhœa of watery and greenish substances. Chamomilla may be given in alternation with Belladonna.

Coffea—When the child is restless, and can not sleep, has some fever. May be given in alternation with Belladonna.

Ignatia—If there are flashes of heat with sudden starting from sleep, and piercing cries. If the diarrhœa is yellowish, becoming soon afterward of a whitish color, slimy and curdled, give Coffea, Ipecac or Calcarea Carb. If it is greenish, give Mercurius, Magnesia, Chamomilla, Sulphur.

Administration of Remedies—Of the remedy selected, dissolve six globules in six teaspoonfuls of water, and give one teaspoonful of the solution for a dose, every one, two, three or four hours, according to the urgency of the case. When the globules are given, three or four will be a dose.

SNUFFLES—COLD IN THE HEAD

This is a common complaint among children, caused by slight inflammation of the membrane lining the nose, produced by cold.

Camphor—Is the best remedy for the first symptoms. If there is nothing convenient but the ordinary spirits of Camphor, put one or two drops upon a lump of sugar and dissolve the sugar in a tumbler half full of water, and give a teaspoonful every two hours.

Arsenicum—If Camphor does not relieve, and especially if the following symptoms are present: Obstruction of the nose, with a discharge of watery acrid mucus; the discharge from the nose produces redness and swelling of the parts. Ipecac may be given, if this does not relieve.

Nux Vomica—Especially when there is but little running from the nose; also with heat in the face; constipation.

Chamomilla—When the difficulty is caused by checked perspiration; redness and inflammation of the eyes; swelling of the face; child cross and fretful.

If the disease proves obstinate, one of the following may be given: Belladonna, Mercurius, Hepar Sulphur, Pulsatilla, Euphrasia.

Administration of Remedies—Of the remedy chosen, dissolve twelve globules in twelve teaspoonfuls of water, and give one teaspoonful of the solution every hour, two, three, or four hours, according to the severity of the symptoms.

THRUSH

This is a disease to which infants are particularly liable within the first and second months, or the first year after birth. It is an ulcerative sore mouth, and first makes its appearance with a redness of the surface of the tongue, and around the gums, and great dryness of the mouth. Soon whitish spots appear, which may increase until they cover the entire surface of the mouth. If this state continues for any length of time, the general health becomes affected, and we have the disease extending to the stomach and bowels, producing diarrhœa, with feverishness and emaciation.

Causes—Want of cleanliness is generally the cause of this disease. The mouth of the child should be washed out with a wet rag, after every meal, especially if nursing from a bottle. Feeding the unfortunate infant with sugar and molasses, or allowing it to suck little bags of sugar and bread, are other causes.

General Treatment—The most important thing is to keep the mouth of the child clean. A few grains of Borax dissolved in a teacup of water, and used as a wash, will generally be effective. A very nice application is to dissolve half a drachm of Borax with one drachm of Glycerine, and one ounce of water. These may be used in a mild attack.

Borax is the best remedy given in the form of pills, twelve of which may be dissolved in twelve teaspoonfuls of water, and a teaspoonful given every three hours. A solution of Borax—a few grains to the cupful of water—may be used as a gargle, in which case it is not necessary to give it in any other form.

Mercurius—When there is salivation, and a tendency to ulceration. This may be followed by Sulphur, if it does not cure.

Arsenicum—When the mouth and throat become ulcerated, the ulcers have a livid hue, and there is diarrhœa with great weakness. Give Nitric Acid if Arsenicum does not relieve.

Coffea and Chamomilla, either in alternation or alone, when the mouth is dry, hot, and very red.

If constipation follows give Nux Vomica, three times a day. The other remedies to be given the same as the Borax.

MILK CRUST

When the disease first appears, and the itching is severe, particularly at night, give Aconite, either alone or in alternation (turn about) with Chamomilla, a dose every two hours.

Calcarea Carb. may be given when the eruption is dry.

If the eruption is moist, the discharge profuse, and smells badly, give Lycopodium.

Administration of Remedies—Dissolve twelve globules in twelve teaspoonfuls of water, and when the disease first appears, give a teaspoonful every three hours. As the child improves, give it two or three times a day, unless other directions are given with the remedy. If preferred, give three globules dry upon the tongue.

REMITTENT FEVER OF INFANTS

At the commencement there is generally languor for several days, with irritability, nausea; lips dry and parched; he starts in his sleep, and there is drowsiness and stupidity. These symptoms increase; there is fever, pulse rapid, tongue coated, dry, and red on the margins; extremities cold; moans, and grinds his teeth; picks at his nose, mouth or eyes; belly swells, and there is constipation, or diarrhœa of mucus, fetid substances; urine looks as if mixed with milk.

General Treatment—The application of water will be found useful in this disease. During the fever, pack the patient in a wet towel or napkin, well covered until he perspires; he is then to be taken out and washed with tepid water. If the head is hot, put cloths, wet in cold water, and well wrung out, on the head, changing them frequently.

Ipecac may be given at first, one globule every three or four hours for

a day; then Bryonia and Rhus, alternately every three hours for two days; then stop the medicine for a day; if the patient is better, give Sulphur. Where there are head symptoms, give Belladonna or Opium, one globule every three or four hours. Where there is considerable fever, skin hot and dry, yellow, slimy or green diarrhœa, pain in the stomach or bowels on pressure, give Chamomilla or Ipecac; when there is obstinate constipation, burning heat of the whole body, occasional spasms, evidences of trouble of the liver or stomach, give Nux Vomica. If there are evidences of trouble in the lungs, such as dry, hacking cough, painful, anxious, hurried respiration, hot skin, thirst, stitches in the side, nightly delirium, give Bryonia.

Administration of Remedies—Dissolve twelve globules in twelve teaspoonfuls of water, and give a teaspoonful every two to four hours, according to urgency of symptoms.

CHOLERA INFANTUM

This is one of the most dangerous diseases of infancy, and generally occurs during the first and second summers. The period of teething is more liable to it, on account of the system at that time being in an unusually excitable condition. Very slight causes, which at other times would produce no effect—as errors in diet, exposure to night air, fatigue —at this time produce serious results. The principal cause, however, is error in diet. It is highly dangerous to change the food at the period of teething, to wean them from the breast, and place them upon artificial diet. This should be done only when absolutely necessary.

Symptoms.—The disease may be either sudden or gradual in its approach. The child may be attacked suddenly with violent vomiting and purging, or may have had, for several days, a slight diarrhœa. The stomach becomes so irritable as to throw off everything taken into it. The substance vomited consists of the contents of the stomach, undigested food, mixed with mucus, and bilious matter.

When everything has been thrown off, there will be severe retchings

and efforts to vomit, without any result. It may occur whenever food is taken in, or only two or three times a day. The diarrhœa is one of the most important symptoms. The stools, which at first consist of undigested food, come to be streaked with green. In time they look like chopped-up greens. They may be yellowish, very watery, and the odor is decidedly fetid and bad.

There may be also, severe pain, as in dysentery, and the discharges may contain blood and mucus. There is considerable fever, quick pulse, mouth hot and dry, great thirst; tongue coated dirty white or yellowish white, except at the edges, which are red; extremities cold; head hot; eyes sunken; nose pointed; features look withered and dried up, like those of an old person; belly swollen, and sometimes tender to the touch; fever generally worse during afternoon and evening.

As very much depends upon the diet in the treatment of this disease, if possible, the child should not be weaned until after the second summer. When, however, this is done, the diet must be regulated according to the peculiarities of the child. As there is generally great thirst, the infant may have as much water as it desires. Fresh cow's milk is undoubtedly the best thing which can be given.

The following preparation will be found excellent: Dissolve a tablespoonful of sugar of milk in three cups of water, boil down to two cups, and add one cup of fresh milk; let the child eat it while warm. If sugar of milk cannot be procured, use loaf sugar; but the first is by far the best. Rice flour gruel sometimes makes a good diet. Prepare as follows: "Take one tablespoonful of rice flour, and one tablespoonful of milk; stir them together, and add a little salt, and nearly a pint of warm water; stir well and boil for fifteen minutes; when cold, this is about the thickness of starch; add a little white sugar to sweeten." When the stomach is very weak, take one part cream, to five of water, and to this add a little arrowroot, sago or tapioca. Another matter of importance is that the child should have plenty of fresh air. If possible, take it into the country. When this cannot be done, let it be carried in the yard, in the park, or in the street. If the child is too sick, carry it on a pillow in a large room

which is well ventilated. A tepid bath, occasionally, will also be found beneficial.

Ipecac—This is generally the most important remedy. To be given when there is nausea and vomiting, with watery diarrhœa, green or fermented stools, with white flecks; tongue coated; great thirst.

Veratrum—Where the attack has been violent, and there is great exhaustion from vomiting, or when the vomiting comes on in paroxysms, or from the slightest movement; brownish or watery evacuations, and coldness of the extremities; face pale, eyes sunken, great thirst.

Chamomilla—Mucous or sour vomiting; passages look like stirred eggs, or green or slimy, with pains like colic; fever worse at night. Better adapted to children when they are cross and fretful from teething.

Mercurius—Stools attended with colic and straining; passages greenish and sour, sometimes mixed with blood; the child smells sour. Rheum is also good for the same symptoms.

Podophyllin—Cramp-like pains; stools frothy, slimy, and very offensive; child moans in its sleep, and rolls his head.

Carbo Vegetabilis—Stools smell putrid, are very thin, and attended with burning pain.

Arsenicum—For great prostration and weakness; nausea; vomiting of everything; stools brown, green or yellowish, and very offensive; skin dry, or cold and clammy; lips and tongue black and cracked; moans in his sleep; abdomen hard and swollen.

Calcarea—For cases of long standing, where there is great emaciation and weakness; abdomen hard and swollen; stools mushy and clay-colored; skin withered and dry.

Sulphur—This remedy is indicated in about the same cases as Calcarea. When the disease appears to be affecting the head, Aconite, Hellebore, Belladonna or Bryonia.

Administration of Remedies—Where the attack is sudden, dissolve twelve globules in twelve teaspoonfuls of water, and give a teaspoonful every fifteen minutes or half hour, until the child is better. Where the case has continued for a long time, give a dose every two or four hours.

CROUP

Croup is divided into two forms: Spasmodic and Membranous. The former is sometimes called false croup, and the latter the true. Children under five years of age are more liable to it than others, although older persons have been attacked, even up to seventy years. It is very alarming, from the suddenness of its attack, and the quickness with which it produces fatal results.

Causes.—It is most frequent in cold, damp climates, and generally produced by sudden and frequent changes in the weather. It is supposed by some to be hereditary, and would certainly appear to be, from the fact that the children of some families are always liable to it on the least exposure.

Symptoms—Croup generally commences with symptoms of catarrh, or cold in the head; a dry cough, hot skin, quick pulse, and thirst; and rattling in the throat, and great restlessness at night. The most certain symptom is the hoarseness, the patient almost losing his voice. The cough is dry and short. These symptoms may continue for a day or two, when about midnight the child will be awakened by a violent paroxysm of coughing; the cough is hoarse and ringing, and once heard will never be forgotten; the breathing is hurried and hissing; the face is flushed, skin hot, and a profuse perspiration breaks out; he tosses wildly about from one side to the other, with clenched hands and protruding eyeballs. As morning approaches the symptoms decline, and the child may fall to sleep.

During the day he may appear well, except a slight hoarseness, and perhaps some fever. Toward evening, however, the hoarseness increases, and he will be awakened from sleep, as on the night before, by a more violent paroxysm than the first. The cough becomes more strangulating and difficult; the obstruction to the passage of air is increased; the face assumes a dark, leaden, dusky hue; the pulse is feeble; the voice broken and suppressed; the head is thrown back to enable the sufferer to breathe

and the face is puffed; the muscles of the neck, chest and abdomen, are brought into powerful action, and the breathing is loud and hissing; the child throws himself about the bed, seeking in vain for relief, and his whole appearance is one of intense agony and suffering; he gasps at his throat as if to tear away the obstruction; drowsiness slowly comes on, the breathing is interrupted; he gasps convulsively, and death closes the horrible scene.

Croup may, however, come on very suddenly, the child going to bed in perfect health, and be attacked in the night. This form is not so dangerous, unless allowed to run on without efforts being made to stop it. Again, the child may have a hoarse, croupy cough for several days, and at the time when the parents are least expecting it, he will be seized with a violent paroxysm, which may terminate fatally. An attack of croup may last from twenty-four hours to fifteen days. When complicated with bronchitis, pneumonia or after scarlet fever, measles or quinsy, it is much more dangerous.

When the first symptoms of croup make their appearance, such as hoarse cough, with fever, give Aconite and Spongia in alternation, every hour. If, however, the child is awakened from sleep, with the peculiar crowing, barking cough of croup, give Tartar Emetic and Spongia in alternation, every ten or fifteen minutes. A warm bath is beneficial when the symptoms are severe. It should be about 96 degrees at first, and gradually made warm by the addition of hot water. When taken from the bath, he should be wiped dry, quickly, and well wrapped up. Cloths wet in cold water applied to the throat, and covered with flannel, will be found of great service. For the ringing, moist and loose cough, which remains after the violence of the paroxysm has subsided, give Spongia and Hepar in alternation, every hour.

When the cough is loose, and there is rattling of mucus in the throat and chest, and spitting of thick phlegm, give Tartar Emetic in alternation with Hepar Sulphur, half an hour, or an hour apart. For the hoarseness remaining after an attack, and to prevent a return the following night, give Phosphorus or Hepar Sulphur, a dose every two or four hours.

When the attack has become very violent, and there is evidence of the formation of a false membrane, and the child is threatened with suffocation, give Kali Bichromacum. A small powder should be given every three or five minutes. If this does not relieve, give Arsenicum, and use hot applications to the throat. When the breathing is very labored, wheezing, rough cough, gasping for air, great danger of suffocation give Bromine. Phosphorus alone, or in alternation with Lachesis, is also valuable in these severe forms

Administration of Remedies—If the remedy is in globules, dissolve twelve, in twelve teaspoonfuls of water. If in powder, give a portion the size of a small pea.

Diet—This should be oatmeal gruel, barley water, toast water or milk.

WHOOPING COUGH

This is a contagious disease, occurring generally but once in the same person. The complaint commences with hoarseness, sneezing and other symptoms of a cold. It is characterized by a convulsive paroxysm of cough, which is attended with hissing breathing, and rattling in the windpipe, the convulsive breathing attended by a whooping sound, until a quantity of thick, ropy mucus is thrown up, when the breathing is again free. During the paroxysms of coughing the child's face is red, and there is sweating about the head, and agitation of the whole body; blood sometimes starts from the nostrils, and he involuntarily passes water, or evacuates the bowels.

A very valuable remedy is Mephitis Putorius. A dose may be given every four hours. Drosera is another valuable remedy, especially when the following symptoms are present: Dry, spasmodic cough, worse at night, when coughing, the child presses its hand upon the pit of the stomach; severe fits of coughing following each other in quick succession, with hemorrhage from the mouth and nose; cough excited by talking or laughing; expectoration of thick, tough phlegm.

Corallia—May be given in some cases with great benefit.

Aconite—May be given when there is much fever, with short, dry cough, and pain in the chest. This remedy may be given in alternation with Bryonia or Phosphorus, especially when there is threatened inflammation of the lungs.

Tartar Emetic—When at the commencement, there is hard, suffocating cough, and when there is rattling of mucus in the chest, paroxysms of cough, with immediate danger of suffocation, cough caused by tickling in the throat, short fits of coughing following in quick succession. Ipecac will be beneficial where the same symptoms are present.

Chamomilla—Wheezing and rattling at each inspiration, cough excited by an irritation of the windpipe, the child is cross and fretful.

Cuprum—Frequent fits of coughing with stiffness of the whole body, and rattling of mucus in the windpipe, prostration after a fit of coughing.

Other remedies are Carbo Veg., Dulcamara, Cina, Belladonna, Mercury, Opium, Hellebore.

Administration of Remedies—Of the remedy chosen, dissolve twelve pills in twelve teaspoonfuls of water, and give a teaspoonful every two, three, or six hours.

COLIC

This is a very frequent and troublesome disorder of infants. It is frequently caused by cold, or by some mental emotion of the mother, affecting the milk. The child screams, kicks and draws up its legs. Frequently there is stoppage of the urine.

Chamomilla—May be given, especially if there is swelling of the abdomen, the child cries, twists the body and draws up its knees, coldness of the extremities. If in addition to these symptoms there is nausea, vomiting and diarrhœa, rumbling of wind and shivering, give Pulsatilla.

If the bowels are constipated, give Nux Vomica. If the discharges are fermented, and have a putrid odor, give Ipecac. If the evacuations are of a sour smell, give Rheum. When it is caused by worms, give Cina, Sulphur, Mercurius. If there is restlessness, sleeplessness and feverish heat, and crying, give Coffea and Belladonna, in alternation (turn about). A tepid bath will frequently relieve the sufferings of the infant.

Administration of Remedies—Put two or three globules dry upon the tongue, or dissolve twelve globules in twelve teaspoonfuls of water, and give a teaspoonful at a dose, repeating every fifteen minutes, half hour or hour.

DIPHTHERIA

This disease is a comparatively new one, with the character of which we have been but little acquainted until within the last few years. It is extremely dangerous, and is contagious, and infectious. It attacks all ages, but principally the young, and among these, especially the full-blooded, fleshy children. Adults are seldom affected with it unless it be by re-infection from others.

Causes—These are seldom fully understood. By some it is considered a malignant form of croup (but it differs very much from that), while by others it is looked upon as a species of Scarlet Fever. It is, however, a disease affecting the whole constitution, but making itself manifest particularly in the throat.

General Treatment—The patient should be placed in a dry, well-ventilated room, in a clean bed, the room being kept moderately warm. No one should be allowed in the room except the attendants. To counteract the odor, it is well to place in the room, dishes of chloride of lime and vinegar.

Aconite, Belladonna, Kali Chloricum, Kali Bi-Chromicum, Proto-Iodide, or Bin-Iodide of Mercury—Are the principal remedies in this disease.

Aconite and Belladonna—In alternation, if the disease commences with a fever, every hour a teaspoonful, until the fever subsides. If, however, the symptoms grow worse, other remedies should be resorted to. Belladonna, Kali Chloricum, Kali Bi-Chromicum and Bin-Iodide of Mercury constitute the remaining remedies. Of the first three, give five drops of Belladonna, twenty drops of Kali Chloricum, and half a grain of the powder of Kali Bi-Chromicum, each in a tumbler half full of water, one or two teaspoonfuls at a dose. Of the Mercury, which is also in

powder, give a dose about the size of a small pea. In the beginning give Belladonna, the next hour Kali Chloricum, the third hour Kali Bi-Chromicum, the fourth hour Bin-Iodide of Mercury, and the fifth hour Belladonna again, and so on. If the patient is better, or but little worse, the next day the intervals between the remedies may be lengthened to two hours, and afterward to three hours. When the throat symptoms have all disappeared, the last remedies may be omitted, and the three first given until all trace of the disease has vanished.

The Bi-Chromate of Potassa is, by some, recommended to be given in this disease, and is best administered by placing in a small tin teapot two or three grains of the powder, pouring in a half cup of hot water, the patient inhaling the vapor as it passes through the spout.

The diet should be carefully regulated, and the patient should be closely watched; as soon as the pulse begins to flag, and the skin to get cool, and symptoms of prostration to show themselves, stimulants should be resorted to. For children the best stimulant is whey, or beef tea.

The soft part of oysters raw or stewed, make a good substitute when the patient is tired of beef tea. As a drink, the patient may be given barley water, toast water, made sour with a little lemon juice, or cold water, to which has been added a little raspberry or strawberry syrup. Ice and ice cream should be allowed, especially during convalescence. As a gargle, salt and water is much used, and bandages dipped in a solution of salt and water should be applied to the throat, or slices of fat bacon may sometimes be used in the same way, with benefit.

CHICKEN POX

For the fever and headache, give Aconite and Belladonna, alternately (turn about).

If there is aching of the bones, and bilious symptoms, give Bryonia and Rhus, alternately.

For restlessness and nervous excitement, disturbed sleep, etc., give

Coffea. If there is a painful discharge of urine give Cantharides or Conium, or both alternately.

If the eruption is very severe, give Tartar Emetic.

Administration of Remedies—Dissolve twelve globules in twelve teaspoonfuls of water, and give a teaspoonful every three or four hours. If there be fever, headache, restlessness, etc., a dose may be given every hour.

CANKER OF THE MOUTH

This form of sore mouth is generally found in children, of from five to ten years of age, and by some it is considered contagious. It is an inflammation of the mucous membrane of the mouth, on which there is poured out a yellowish fluid, which assumes a very destructive character if allowed to go on, causing deep, dark sores.

Symptoms—First, pain and uneasy sensation in the gums, which soon become hot, dry, and very sensitive, attended with languor, indisposition to play or move about, loss of appetite, thirst, gums becoming swollen, spongy, and bleeding when touched, the internal surface of the cheeks and gums are spotted with patches of false membrane, under which appears ulcers. In some cases, the false membrane is wanting, the ulcers presenting a greyish or livid appearance.

If the disease is severe, the glands situated beneath the jaw become swollen, hard and painful, the breath becoming very offensive, and the secretion of the saliva being very much increased. Sometimes the teeth may be loosened and fall out. There may be a copious discharge of offensive, bloody matter from the mouth, and the breath may become very fetid, almost gangrenous. The movements of the jaw are stiff, and swallowing is interfered with, accompanied with soreness of the neck and throat. The patient loses strength rapidly, and becomes very much prostrated.

Mercury—This remedy is indicated in almost every case, and may always be given at the commencement of the disease, except when it is caused by Mercury, in which case, give Carbo Vegetabilis, Hepar Sulphur, or Nitric Acid.

Nux Vomica—Ulcers putrid and painful, swelling of the gums, there being fetid ulcers all over the surface of the mouth, accompanied by constipation.

Arsenicum—Ulceration of the margins of the tongue, with violent, burning pains, gums swollen and easily bleeding, great restlessness, and a desire to drink frequently.

Capsicum—Especially for persons of full habit, in quiet life, and where there are blisters or vesicles on the tongue, together with swelling of the gums.

Nitric Acid—If Mercury does not relieve, or if the gums are swollen, looking whitish and bleeding easily, accompanied with looseness of the teeth, salivation, and putrid odor from the mouth.

Carbo Vegetabilis—Ulceration of the gums and tongue, with profuse bleeding, accompanied by a burning sensation, and excessive fetidness of the ulcers.

Sulphur—To be given at the end of the cure, when there is swelling of the gums, together with beating pain, blisters which burn when eating, offensive or sour smell from the mouth, constipation, or green, slimy diarrhœa.

As a wash use cold water, or sometimes lemon juice or sage tea; a weak solution of brandy and water will also prove beneficial.

Administration of Remedies—Of the remedy chosen dissolve twelve globules in twelve teaspoonfuls of water, and give a teaspoonful every two, three, or four hours, according to the violence of the symptoms.

MEASLES

This disease occurring generally in childhood, although it sometimes attacks grown persons, who are liable to have it more severely than children. One attack will generally secure the person against another. It is a contagious disease, and requires from seven to twenty days after exposure for its appearance.

Note.—If the Measles is malignant, showing symptoms of putrid fever,

such as a dark livid rash, mixed with dark-red spots, great debility, the eruption coming and going, a competent physician should be called.

When the attack is mild, Aconite and Pulsatilla given in alternation (dose, four globules) every two or three hours, will generally be all that will be required. If there is trouble with the stomach give an occasional dose of Ipecac or Belladonna. When the throat is sore, dry, and painful during swallowing; thirst and spasmodic cough; also when there is congestion of the head with high fever, restlessness and delirium.

Aconite and Bryonia should be given in alternation (twelve globules dissolved in twelve teaspoonfuls of water, and a teaspoonful at a dose) every two or three hours, when there is violent, dry cough, with shooting pains in the chest, indicating bronchitis or pneumonia.

Ipecac and Bryonia in alternation every half hour or hour, if the eruption does not come out well, or strikes in suddenly, with paleness and sickness at the stomach. Euphrasia—when the eyes are inflamed and watery.

During an epidemic of Measles, it is recommended to give a dose (four globules) of Pulsatilla every night, which will either prevent an attack or make it much milder.

Administration of Remedies—When the dose is not mentioned with the remedy, dissolve twelve globules in twelve teaspoonfuls of water, and give a teaspoonful every two or three hours.

SCARLET RASH

This is a different disease from scarlet fever, although sometimes mistaken for it, and also for measles. The eruption of scarlet rash consists of minute grain-like elevations, which can be easily felt by passing the hand over the surface, while the eruption of scarlet fever is perfectly smooth.

Causes—Children of any age are liable to it, although it is found oftener in infants. It may be caused by irritation of the stomach and bowels, by sudden changes in the weather, by the sudden suppression of

perspiration, by the use of cold drinks when the body is heated, and by violent exercise. It is not contagious.

Symptoms—The eruption is generally preceded by chilliness, alternating with heat, weakness, heaviness and fullness of the head, restlessness, heat and dryness of the skin, loss of appetite, etc. These symptoms disappear as soon as the eruption shows itself, which will generally be about the third or fourth day. Scarlet rash may be distinguished from scarlet fever by the facts, that in scarlet fever the eruption is of a bright red or scarlet, and is spread uniformly over the surface; in scarlet rash the eruption is much darker, being sometimes almost purple, is spread over the body in irregular circular patches, and on being pressed with the finger, leaves no white imprint. In scarlet fever we have a sore throat, and in scarlet rash none. Scarlet rash may be distinguished from measles by the fact that in the latter we have symptoms of catarrh, such as running at the nose, eyes, etc.

Treatment—In ordinary cases the only remedy necessary is Aconite, which may be given in alternation (turn about) with Coffea, when there are irritability and restlessness.

If there are nausea and vomiting, give Ipecac or Pulsatilla.

In case the rash suddenly disappears give Ipecac and Bryonia in alternation (turn about) every half hour, or hour, a dose, at the same time covering the patient well.

If there appears to be congestion of the head with drowsiness, give Opium. If there be sudden startings, bloodshot eyes, and fullness of the head, give Belladonna.

Administration of Remedies—Dissolve twelve globules in twelve teaspoonfuls of water, and give a teaspoonful every one, two, or three hours, according to the severity of the symptoms.

SCARLET FEVER

In the treatment of this disease the remedy of the greatest importance is Belladonna. It is to be given in all forms and stages of the disease, and

in the simple form will generally be the only one required. The symptoms calling for it are as follows: Dry, burning fever; quick pulse, great thirst, dry, red, or whitish-coated tongue; throat and tonsils dry, inflamed and swollen; difficulty of swallowing; beating of the arteries of the neck; face hot, red, and bloated; dizziness, fullness, and pressure in the head, with shooting pains, which are aggravated by motion; loss of appetite, and nausea and vomiting; violent cough; dry, burning heat of skin; starting from sleep; great agitation, and tossing about; scarlet eruption on the face, and over the whole body. In severe cases the Belladonna may be given as often as once an hour, until the symptoms are better. In mild cases, a dose may be given every two or three hours.

If the fever is high, pulse rapid and full, dry heat, head hot, great agitation, give Aconite in alternation (turn about) with Belladonna every hour. When the patient is better under this treatment during the day, but the symptoms increase at night with restlessness and sleeplessness, give Coffea and Belladonna, every hour alternately (turn about) until the patient is composed.

When there is great drowsiness and tossing about, tongue very dry, swelling of the glands of the neck, skin shining on the face, head thrown back, and almost constant delirium, give Rhus Tox. and Belladonna every hour alternately.

Mercurius may be given in alternation every hour, with Belladonna when there are ulceration of the tonsils, swelling of the glands of the neck, great quantity of saliva running from the mouth, and offensive breath. If no improvement takes place in twelve hours, give Nitric Acid the same as Mercury. If, however, the symptoms continue to grow worse, after having given the Nitric Acid six or eight hours, and the discharge from the mouth is very offensive, give Arsenic and Lachesis alternately every hour, a dose until the patient is better. Opium may be given when the breathing resembles snoring; starting or constant delirium; face puffed and red; burning heat of skin, with or without perspiration.

When the eruption strikes in, or the skin assumes a livid, bluish hue,

give Bryonia and Belladonna in alternation (turn about) every half hour. If these afford no relief, give Ipecac or Camphor.

Sulphur is a valuable remedy, and should be given (an occasional dose) when the skin begins to peel off. When the symptoms calling for Belladonna do not yield promptly to that remedy, give an occasional dose of Sulphur.

If symptoms of croup appear, give Aconite and Hepar Sulphur, a dose every hour, alternately.

For Earache, after Scarlet Fever, give Pulsatilla, a dose every one or two hours, according to the severity of the symptoms. If this affords no relief, give Belladonna and Hepar Sulphur in alternation.

For running from the ears, give Pulsatilla, a dose every six hours, for three or four days; when, if not better, give Calcarea or Silicea, in the same manner. If after the disease the child shows symptoms of dropsy of the brain (head hot, extremities cold, sleeps with eyes half open, vomits on moving), give Bryonia and Hellebore alternately (turn about) every two hours, until the symptoms are better.

When the whole body swells give Belladonna and Hellebore, alternately every two hours, and afterward Bryonia, Rhus, or Apis Mellifica.

When, before the eruption comes out, there are convulsions, give Belladonna and Cuprum in alternation, a dose every fifteen minutes.

Administration of Remedies—Of the remedy chosen dissolve twelve globules in twelve teaspoonfuls of water, and give one teaspoonful at a dose, every half hour, hour, or two hours, according to the severity of the symptoms.

CHAPTER XXXV.

THE NECESSITY OF SEX EDUCATION

THE FOUR STORIES OF LIFE

IT is a truism that all parents wish their children to grow up clean of mind and body. To do this, parents must assume the responsibility of instructing their children in the facts of sex and reproduction as a means of guarding against the evils of improper training which practically every child sooner or later receives from unclean sources. The United States government, thru the Department of the United States Public Health Service, is taking the lead in urging that parents consider the greatest menace to the well-being of this and coming generations, and the course they can follow to protect the children from this menace, and parents are urged to study the desirability of sex instruction, the means to be followed in imparting sex knowledge, and the ages in the child's life at which the various stages of such instruction should come. We will therefore deal successively with the questions, why, when and how proper sex instruction should be imparted to our boys and girls.

WHY?

It is agreed that the illusions of childhood should not be broken down and the boys and girls brought face to face with the bald facts of life any sooner than is absolutely necessary. Investigation has proven that most children get their first sex knowledge from improper sources at a much earlier age than most parents are willing to believe, and the fact that parents do not discuss these subjects with children during their early years, does not mean that the child remains in ignorance on these matters.

If a child is not prepared in advance with the knowledge of the true cleanness of the subject and its physiological and biological principles, the great truths of reproduction will be distorted into lewdness and obscenity.

Judging by your own experience. Would you prefer to have your child taught by foul minded playmates, by obscene pictures, by lewd, ignorant servants and hired men, or do you prefer to tell him yourself,

tactfully and cleanly, building up his knowledge gradually and bringing the reproductive functions into proper perspective as one of the most wonderful of human endowments. Just ask yourself the question, Where did you first get your knowledge of sex and reproduction? What effect did the source of your first knowledge have upon the attitude which you adopted towards such matters and toward persons of the opposite sex?

CHILD'S CURIOSITY MUST BE SATISFIED

Some parents may feel that a child will not suffer in a manner to justify our statement that lack of the proper instructions may expose the child to grave menaces to health and morals, even though they acknowledge that information obtained from wrongful sources is most undesirable. Just consider the case though of a typical boy, possibly your son or any other parent's son. His natural curiosity will lead him from the earliest period of his life to ask questions about the coming of babies in his own and other families. If these questions are met by his parents in an evasive manner, he will only be stimulated to satisfy his curiosity through some other source. In his search for further answers to his questions, he will come in contact when from nine to twelve years of age, with information from the outside in which are coupled with the facts, many unclean conceptions and smutty stories. The confidential relations between himself and his parents have been broken when they fail to answer his questions and the outside information, bearing as it does all the attractiveness of forbidden fruit, the boy continues to build up a fund of distorted obscenity which satisfies his original wholesome curiosity as to the great truths of race perpetuation. The conventional reticence among adults in regard to sex matters causes the boy as he grows older to go to those who discuss such matters freely, and who are less likely to give him proper information. Being unprepared by advice from his parents, the natural physical changes which come to him at the age of fourteen or fifteen, naturally worry and puzzle him, and though his mind might be set at rest by a word or two from his parents or family doctor, he is denied that information.

Instead, he learns from the advertising of quack doctors and many times from his associates that this ordinary phenomenon in his life, is really a sign of weakness and indicative of a need for sex activity. He

has never received any training to show either the need for self-control at this critical period or to develop such self-control. The only knowledge he has of the existence of venereal diseases is in the jokes, and allusions of "wiser" companions, which emphasize the pleasures and minimize the dangers of debauchery. Meeting the temptations as every young man is apt to do, he is more inclined to yield because he has not been informed of the real dangers which they involve, whereas had be been properly forewarned, he would successfully resist them. The first mis-step, as every physician knows, is only too often followed by infection, and not having accurate information as to the seriousness of the disease, and being anxious to avoid being found out, the boy attempts to treat himself or falls into the hands of a quack doctor, with the result that there is frequently a chronic affection developed, which blights his own life and may endanger the health and even lives of those nearest and dearest to him.

IT MIGHT BE YOUR OWN SON OR DAUGHTER

We do not claim that this will happen in the life of every untaught child, for despite their lack of instruction some children may escape infection, but what is more important possibly, very few of them escape innoculation with impure thoughts. The course outlined however is so easily possible and so often true, that no parent can disregard it.

It is a fact that the boy whose first sex instruction comes from unclean sources shuns the subject in the presence of his parents.

It is a fact that wrong instruction builds up an unwholesome attitude toward sex matters.

It is a fact that improper teaching becomes increasingly more available as the boy grows older.

It is a fact that quack doctors prey upon youthful ignorance and have frightened many a boy to his downfall.

It is a fact that self-control and knowledge of danger are the boy's chief protection, but that many boys never learn this until too late.

It is a fact that the consequences of such a course as outlined, in which ignorance or misinformation are the prime factors, may be as serious as those of the most thoroughgoing, deliberate career of dissipation.

Though we have thus far discussed the sex instruction problem largely with respect to boys, the situation in the case of the girls is different in detail but not in principle.

Your daughter needs protection. It is well known that the little girl is just as likely as the little boy to be contaminated by sources of impure sex knowledge. The conditions which their little daughters must face, would horrify most parents if they really knew the facts, and it is through parental instruction in advance only that the girl will be enabled to meet these conditions without injury either mentally or physically. When development into womanhood brings increased need for confidential relations between mother and daughter, there is still too often a lack of real confidence and the girl turns for what help she needs and desires, to some other person than the mother. Frequently the young girl is sent to the physician's office with a note that "Mary be told what she ought to know." The real tragedy is the fact that so many times the mother realizes the daughter should have this information but is unable to give it to her, and thus the door is closed to the development of that type of confidence between mother and daughter, which is the mother's highest privilege. No mother ought to permit this great office of hers to be usurped, and when she does, there is always a feeling of regret that the mother has missed so much.

IMPORTANCE OF SELF-CONTROL

Knowledge alone will of course protect neither boy nor girl. The possession of reasonably complete and accurate knowledge of sex knowledge however, and of a right conception of the importance of the question will do much to build up in the mind of the boy or girl a proper attitude which will later develop into that self-control in the face of temptation which is at the basis of right conduct.

All this training which we have been considering—most important of all from the standpoint of physical health and equally important with the early training from the moral viewpoint—will progress easily if the proper foundations have been laid in childhood. The respect of the budding young man or woman for later training may, however, be gained only

with difficulty if confidential relations between parent and child have not been built up earlier in life.

WHEN?

Sex instruction should begin the minute your child asks his first question regardless of his age. Many parents, while seeing the need for forging, during their child's early years the weapon of self-control and place it into his hands as he enters into the stern battle of adolescence have delayed their beginning until too late. Parents usually place too low an estimate on the seriousness of even the very little child's situation. Statements collected from 637 college men showed that 93 per cent. of this group received thir first sex impressions before the age of fourteen, and 72 per cent. before the age of twelve. The ages at which first impressions were gained range in the whole group from four to fifteen. The largest group included those whose first knowledge came at ten or eleven years.

Government statistics show nine and a half years to be the average age in which boys receive their first permanent sex impressions, usually through improper sources. Thirteen and a half years as the average age at which boys are likely to begin some sort of sexual practice. Information from 771 men showed that scarcely any of the 771 had been properly instructed before the age of twelve, and in most cases such instruction first came after the fourteenth year. These figures clearly establish the fact that most parents postpone too long such instructions as they give, and that its effects are lessened by the earlier upbuilding of an unclean attitude towards matters of sex. It is hard for the parent to think that the child, whom he considers a mere baby, is exposed to immorality and uncleanness, but this is unfortunately the case nevertheless even where the child and his associates are apparently products of the most refined environments.

Self-control comes only through training and it can not be gained in a short time. Only by careful training and discipline, introduced early and continued throughout childhood and early adolescence can the boy or girl be helped to build up sufficient control to insure self-protection.

Begin sex instruction with your child at such an age that when first he hears from an unclean source perverted statements of sex functions, he will not hesitate to come to you for advice.

Don't think you are protecting your child from disagreeable facts when in reality you are leaving unguarded the way for the poisoning of his mind—later perhaps for the poisoning of his body also.

Help your child to develop the self-control which he must have to win his fight against the temptations of adolescence.

The mere telling of physiological facts is not the fulfillment of the parent's duty towards the child. A physician, as suggested, could probably do that better than the average parent, but the physician would lack the thorough knowledge of the child and confidential relation with him, which enables the parent tactfully to present the subject in a character building as well as informative way, and the next question which naturally follows is just how to tell the child.

HOW?

There is a wholesome curiosity regarding matters of birth and sex implanted by nature in every child, and it is likely to make its first appearance at the age of five, six or seven, in such questions as Where did the baby come from, or Where did the kittens come from? Any evasion on the part of the parent is sure to be recognized by the child and will cause him to seek further information elsewhere. A willingness to meet his inquiries will preserve a feeling of confidence between child and parents, and serve as a sure foundation for further discussions. Every parent should prepare in advance to satisfy the childish curiosity in a manner which will give the child the exact information in a character building manner, and there is no one phase of human relations which demands more tact than does the unfolding of the veil which surrounds the ever recurring mystery of creation to the mind of the curious child.

When parents bring children into the world, they assume the responsibility of developing their mind with thoughts of the right kind. The child is born utterly devoid of knowledge, physically or mentally, and naturally learns to go to the parents for an explanation of all things and comes to have absolute confidence in them until this confidence is shaken

by some act of the parents. The greatest calamity that can befall a child is to be forced to lose its faith in the wisdom and goodness of its parents. If the parents expect to continue to be the child's ideal teachers, they must hold the child's confidence and be not only willing, but prepared to answer questions without evasion or deception.

MOTHER THE FIRST INSTRUCTOR

Usually the first instruction will lead up to the story of where children come from, and in the nature of the case will most often be given by the mother, and it must be her purpose to tell the story of the reproduction of life so that the child will always feel free to come to her and ask questions about it, and also make it clear that it is a subject which should not be discussed with playmates and other people. It is necessary to safeguard children from evil impulses within and bad influences without, and this can be done if they are trained to come to the parents to correct false impressions which may be obtained from outside sources. Both the father and the mother must be prepared to discuss this most important subject, because after they reach ten years of age, the girl will usually prefer to talk to the mother and the boy will naturally discuss these questions with his father.

Sex hygiene is being taught more generally through the high schools, and there is a growing demand that education along this line be developed in the seventh and eighth grades, but unquestionably all teaching of the subject to the younger children will be left entirely to the parents, and if they are to measure up to their responsibilities they must be prepared to give this information in a form that will help build the character of the child and give it the proper understanding of this great underlying problem. The best way is to tell how God or Nature brings vegetables, plants, trees, etc., into the world, and the child will be able to comprehend each interesting detail much more completely than most parent's imagine. By bringing out these things clearly as to plants and the lower forms of animal life, the child will more easily understand at the proper time, the same things concerning animals and man.

There are four so-called Stories of Life, which are the accredited methods of unfolding this great subject to children. The first is the story

of plants, the second that of fish, the third insects and birds, and the fourth animal and humans. If it is possible, the first story should be told during the Spring or Summer, because then it is easy to show the child the parts of the plants as they are described and this makes the lesson more real.

EXPLAIN DIFFERENCE BETWEEN BOY AND GIRL

Care must be used in properly explaining the difference between the boy and girl to the little child. The prudish parent will neglect to do this, and consequently will lead the child to obtain this information from outside sources, which usually gives the wrong thoughts to them.

Where there is a boy and girl in the same family it is a good plan to bathe and dress them together, for this will give the mother a splendid opportunity to explain why there is a difference, and in doing so, she should not show any signs of embarrassment, but instead should gracefully allow them the utmost freedom to view and admire every part of the body. The older child will be led to inquire about the sexual organs of the baby, and why it is called a boy or a girl. The mother will then call their attention to the organs that are alike in form and function in both boys and girls, and then draw their minds to the fact that the sexual organs are the only ones which differ in any marked way between boys and girls, and that it is this difference which makes one a boy and the other a girl. It is perfectly proper to explain that the organs of sex in a boy cause him to grow up to be a man and later to marry and become a father, while the organs of sex in a girl cause her to grow up to be a woman, and later to marry and become a mother. Tell them the true names of these organs, and impress upon their minds that these organs are pure, important and sacred. Also that their father and mother are their natural teachers in all these things, so when they want to know more about these organs, they should feel free to come to you for advice and information.

The mating of the fly is a common sight to children in the Spring and Summer, and the house fly furnishes an excellent object lesson which can be used by parents in a fuller explanation of sexual mating, and they can pass easily from the mating of flies to that of birds and the domestic fowls. Parents should invite their children to view the mating and birth

of domestic animals rather than have them form the habit of seeking such sights in a sneaking manner, and it gives them a chance to explain reproduction and birth, and to impress upon the children that such things are a natural part of life.

STORY OF THE BABY PLANTS.

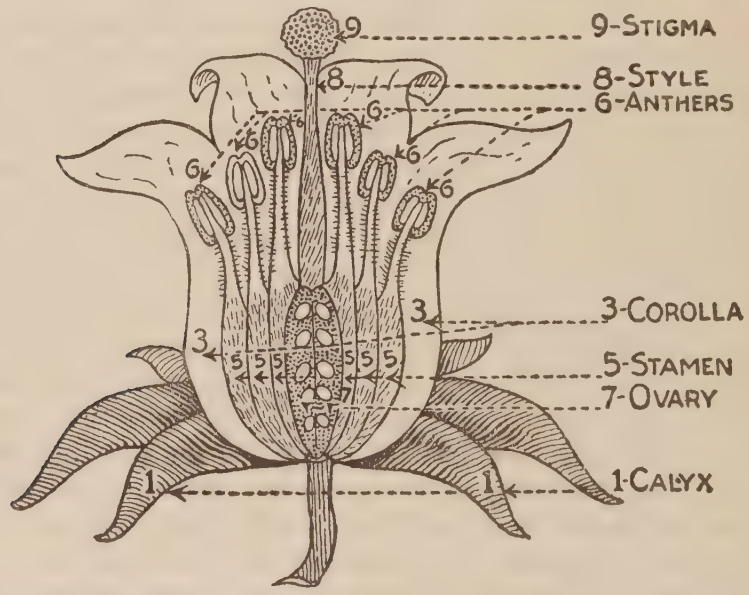
"Mamma, where did the baby come from?" "Mother is pleased to have you ask that question, Johnny, because that is one of the most wonderful and interesting stories which you will ever be told. You know that Papa and Mamma love you more dearly than anyone else, and we are more interested in helping you to learn about things than anyone else, so whenever you have any questions in your mind about anything, you must always come to Mamma or Papa first, and God intends for all children to learn from their parents how He sends the little ones into the home.

When you were born you could not talk, and you have had to gradually learn everything that you know. There are many things in the world which you can not understand now, but which will be perfectly clear to you when you grow older. There are some mysteries about how babies come into the world which you are not yet old enough to understand, but Mamma will tell you now the beautiful story of how God brings the flowers and grass and trees into the world, and she will continue these stories until you understand all about how the baby birds and frogs and insects and animals are born, and finally the last story will be how your little baby sister (or brother) (or yourself) came into our home.

To help make this first story plain to you, Mother has gathered this beautiful flower, for in all flowering plants, the story of life begins in the flower. You will notice that all parts of this flower are arranged in whorls or circles, and I will tell you the names of them as we study this flower.

This outer circle is called the calyx (1) the second whorl is the corolla (3) and is usually the most highly colored part of the flower. These small slender organs, making up the next circle are called stamens (5), and on the very top of the stamen you will find little delicate bodies called anthers (6) filled with a very fine powdered substance, called pollen, and these are so placed that the slightest breeze will shake them and the pollen will drop

off. The very center of the flower is called the pistil, and it is formed in three parts, the bottom is the pod (7) or ovary, in which you will see little seeds are formed. Growing on the top of the pod is usually found a slender stem called the style (8), and on top of this is a spongy enlargement called the stigma (9). This pistil, made up of the stigma, style and ovary is the Mamma part of the flower and the stamen, which is the circle surrounding it is the Papa part of the flower. When the flower



is in full bloom, the pollen is ripe and the Papa parts or stamen of the flower burst open and the pollen falls out and is carried by the wind or insects to the stigma or Mamma part of the flower, which opens and admits the tiny grains of pollen. These are now carried to the seed in the ovary by little currents of water from the rain or dew and the pollen which is the Papa nature unites with the germs or seed in the ovary, possessing the Mother nature, and are thus fertilized, which means that the Papa and Mamma natures having been united, there is life in the seed. If this union had not occurred in the Mamma part of the flower, the seeds would not grow and ripen in the pod.

While the seed is ripening, food is stored up for the little baby plants to live on during the first few days after they come into the world. When the seeds are ripe, the pod bursts open, and the seeds fall upon the ground and nature covers them over so that when the Springtime comes, the sunshine and rain cause the life in the seeds to become active and soon they begin to grow and the little stems appear above the ground and are just a little baby flower as you were just a little baby boy when you came into our home.

By His command, "Be fruitful and multiply," God meant that the little baby plants should come into the world and keep it beautiful and furnish men and animals with plenty of food, and in this story Mamma has told you how all the grown up plants obey His command.

Mamma has now told you the story of the plants and you have learned in a general way about the two great laws of nature, the first law being that there must be a father and mother for each plant and tree which grows from seed. The second law you have learned is that before a baby plant can come into the world the father and mother natures must unite with each other and when Mamma tells you about God's plan in bringing baby fish, insects, birds, animals and human babies into the world, you will find that He uses the same laws.

STORY OF THE BABY FISH.

Mamma promised to tell you about God's plan of bringing baby fish into the world, and before starting that story, we will review the story of the baby plants and trees and refresh our minds with the things we learned in that story. You will remember that the flowers possess both male and female organs. That the male organs produced a fertilizing substance called pollen, and that the female organs contained the seed. Also that the father and mother nature must be united to produce baby plants, and that this all followed out God's plan of bringing into the world the beautiful flowers, plants, vegetables and trees. When God created fish, insects, birds, and animals, he gave to one a Papa or male nature, with suitable sexual organs, and to another of the same kind a Mamma or female nature, with suitable sexual organs. The sexual organs of the female produce eggs, and the sexual organs of the male produce the fertilizing fluid called

semen. Thousands of tiny eggs are formed in the ovary of the mother fish, and when these eggs are ready to be laid, the mother fish seeks a shallow place in which to lay her eggs. The eggs are laid in a thin substance something like the white of an egg, which spreads out in a very thin film, holding the little eggs very closely together. The father fish swims along behind the mother fish and drops from his body a fluid called milt, which contains many thousands of sperm cells that unite with the eggs laid by the mother fish. In this manner the father nature unites with the mother nature to produce every little fish that swims in ponds, rivers, lakes and seas.

The strange thing about fish is that they leave their eggs as soon as they are laid, and fertilized, and many never see their young. Parent fish do not labor to support and protect their young, and for these reasons they have no love for the baby fish, like Mamma and Papa have for you.

You will remember that in the plants the seeds are fertilized by the pollen while still in the ovary. Mamma has just told you that the fish eggs are fertilized outside of the body, but in nearly all animals above the fish, the eggs are fertilized while in the mother's body. There is no love between male or female fish. They do not pair off or live in families, and all the young grow up without the parents' aid or care.

STORY OF INSECTS AND BIRDS.

Mamma thinks you are now old enough to be told the third story in the wonderful story of life, which is about baby insects and birds. You will recall that there was no love feeling between the male and female among the plants or fish. The beginning of the simplest form of interest or love among animals, is found among the insects and reptiles, for the males choose their mates when led by instinct to bring their young into the world. This interest of the parents is limited, however, generally to the protection and care of the eggs and the food provided for the young. The bee and the ant do not pair off and mate like other insects, but live in colonies and do not seem to have any special interest in their babies or even in their mates. The wonderful organizations they form and the homes they build, really rival the work done by the intelligence and skill

of man, and as you grow older you will be interested in reading many books written about these curious insects.

FATHER AND MOTHER BIRD VERY LOVING

In our study of the bird family, you will find the higher form of instinct with more love and care for each other and their babies, than among the animals already studied. Birds are beautiful and very interesting, and a good many of them are fine singers. The male bird chooses a mate from among the female birds in the springtime, and we say they are mated or married. Their next task is to build a nest or home for their babies. The swallows build their nest in the chimneys, the woodpecker in the hollow limb of the tree, the partridge and meadow lark on the ground, but nearly all birds build them in bushes or trees.

The female bird has organs called ovaries, in which at certain seasons of the year little eggs are formed, and while they are small and soft, they are fertilized by the male bird. These eggs continue to grow in the mother bird's body, and a thin shell is formed on the outside. When fully matured in the mother bird's body, they are laid in the nest which has already been built. After the eggs are laid, they must be kept warm, or they will not hatch. So the mother bird stays in her nest and sits on the eggs until time for the fertilized germ of the egg to form a little bird. Finally the baby bird is ready to come into the world, and pecks a hole in the thin shell. The father bird is a wonderful example of devotion while the mother bird is sitting on the eggs, for he busies himself with getting food which he brings to the mother bird, and at other times he will be found perched on a nearby limb, cheering the mother bird by singing for her and talking to her. He also frequently sits on the eggs while the mother bird flies around and gets some exercise. Both father and mother bird are busy from morning until night after the baby birds are hatched, gathering worms and feeding them. As the little birds grow, the father and mother teach them how to fly, and in some mysterious way warns them against the dangers which will surround them.

After the birds are grown they live with their parents in flocks until the following spring, when they again will mate and rear families, and this, dear one, is the wonderful story of the beautiful birds, without which this world would be devoid of much beauty and music.

STORY OF THE ANIMAL AND HUMAN BABIES.

It is now time for Mamma to talk to you about God's plan of bringing your baby sister into our home, and the same two laws which we found among the plants, the fish and birds, also control the birth of the higher animals and human beings. The first law is that every kind of a baby, whether it be plant, animal or human, must come into the world from a seed or egg, and the second law is that there must be a father and mother nature, and that these natures must unite before there can be a baby of any kind come into the world.

You will remember that the fertilizing substance called pollen, was produced in plants by the male sexual organ called the anther. Well, the fertilizing substance in animals and man is produced by the male sexual organ called the testis, and this substance in animals and man is called semen. The female sexual organs called the ovaries produced the little seeds in plants, and eggs in animals. You also know now that every baby plant comes from the union of the father nature (pollen) with the mother nature (seeds). Likewise, every baby fish, frog and bird comes from the union of the father nature (semen) with the mother nature (egg), and this is equally true concerning all animal and human babies.

I will now explain to you nature's plan of fertilizing the eggs of a bird. As you know, in the body of all mothers are the ovaries or egg nests. Bird and fish mothers have two of these ovaries. There is a long tube that leads from each of them to an outer opening of the mother's body. After the eggs are fully formed, they are discharged through these tubes into the water or nest. Nature teaches the birds how to build their nests for the eggs, and that they must sit on them until the baby birds are hatched. Also that they must protect, feed and teach their young. So nature also has provided a way by which the male bird can fertilize the eggs at the proper time while in the mother's body. The male bird knows from nature how to bring his body in contact with the body of the female

so that the fertilizing substance will be forced through the tubes to the eggs in the mother's body. This is called coition or copulation, and you have many times witnessed this among the chickens and also the housefly.

You now understand fully that every baby bird was once a part of its father and mother, and why it must have a father and mother, and why their two natures must come together. When life begins in a seed, it is called the embryo until after the seed sprouts, and then it is a baby plant. Likewise the egg of the insect, fish or bird is an embryo until the egg is hatched and then it is a baby insect, fish or bird. The embryo is very small and the bulk of the seed or egg consists of food stuff stored up for the embryo to live on until the seed sprouts or the egg hatches. In the higher animals and man, life is more precious and valuable than in the lower orders such as insects, fish and birds, and nature protects it more carefully both before and after it comes into the world. Baby animals and human babies are fed on milk formed by the mammary glands in the breasts of the mother, and for this reason all of the higher animals and man are called mammals. Horses, dogs, cats, cattle, hogs and many kinds of higher animals, as well as the human family, feed their young in this way. When the embryo of the seed becomes a baby plant, we say it is sprouting or germinating. When the embryo of an egg becomes a baby fish or bird, we call the process hatching. When the embryo of an animal or human becomes a baby, we say that it has been born.

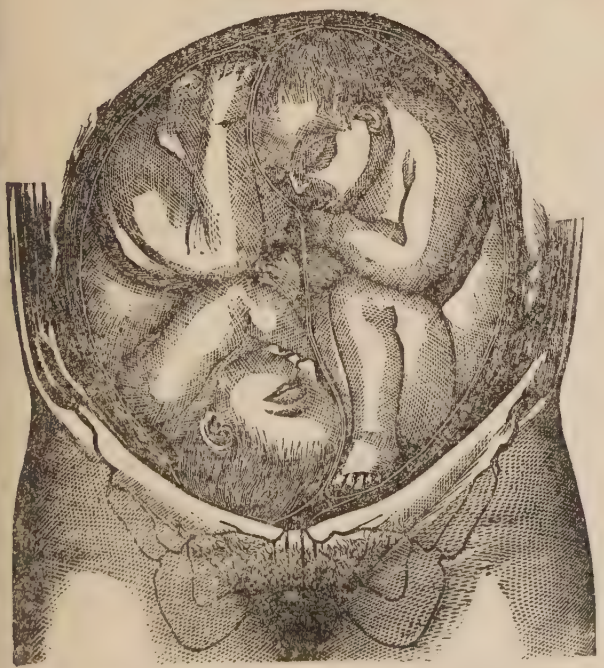
The embryo of a bird requires food not to exceed three weeks before it is old enough to leave the shell and take care of itself, and plenty of food can be stored up in the egg to last it that long, but the embryo of animals and man must have food for from one month to more than a year before they are old enough to come into the world as babies, and so nature has the most wonderful arrangement to take care of them from the time they are an embryo until they are born babies. The home for the embryo in the body of the female is a very cozy nest called the womb, containing the two ovaries in which the little eggs form, and connected with the door of the womb is the tube we have already mentioned, which leads to the outer opening of the mother's body. Various numbers of eggs are formed by the ovaries and sent over to the womb. In the female sheep one or two

eggs are formed at one time. In the female cat there may be from three to twelve eggs formed at one time, but in many of the animals such as the cow or the horse, and also in the human, there is usually but one egg formed at a time and the number of eggs formed at one time determines the number of babies that will be born, if the eggs are fertilized by the male. If the mamma and papa animals have not mated, the eggs will not be fertilized and the female can not become a mother. This is why pure women do not become mothers until they are married.

If when the egg is formed by one of the ovaries and sent over to the womb, it is met by a sperm cell from the male and fertilized, a little embryo becomes attached to the walls of the womb by a membrane called the placenta and starts to grow. A little cord forms gradually which contains blood vessels, and is connected by one end with the body of the embryo at the point called the navel, and at the other end with the placenta, and your navel shows where you were once connected with mamma's body. The embryo requires air, water and food while it remains in its mother's body, and these are furnished by the mother and sent into the embryo through this cord. After the embryo has been in the mother nest as long as God planned for it to remain there, the little door of the nest opens and the strong muscles will contract and force the young baby into the outer world, and this is what is called the birth of the baby, and it is the way in which you came into our home.

This is the wonderful study of your birth, Johnny, and you can now understand why Papa and Mamma love you so much, and are so much interested in what you do. You must always try to do the right things, and I want you to promise now that you will make a manly effort to keep pure, and if you do, Papa and Mamma will be repaid many times for any sacrifice which they may make for you.

The fœtus, inclosed in its membranes, with expanding os uteri, in first stage of labor.



TWINS IN UTERO, HEAD AND BREECH PRESENTING.

At eight months, the fœtus seems to grow rather in thickness than in length; it is only sixteen to eighteen inches long and yet weighs from four to five pounds. The skin is very red, and covered with down and a considerable quantity of sebaceous matter. The lower jaw, which at first was very short, is now as long as the upper one.

Finally, at term the fœtus is about nineteen to twenty-three inches long, and weighs from six to nine pounds. The red blood circulates, in the capillaries and the skin performs the functions of perspiration; the nails are fully developed.

REPRODUCTIVE ORGANS AT CHILDBIRTH.

PART VIII

CHAPTER XXXVI

TABLE OF BARREN AND CONCEPTIVE PERIODS

The following table will be helpful to those married women who are seeking knowledge as to their procreative possibilities.

TABLE OF BARREN AND CONCEPTIVE PERIODS

Menses begin	Menses end	Fruitful period begins	Fruitful period ends	Barren period begins	Barren period ends
Jan. 1	Jan. 5	Jan. 6	Jan. 17	Jan. 18	Jan. 28
2	6	7	18	19	29
3	7	8	19	20	30
4	8	9	20	21	31
5	9	10	21	22	Feb. 1
6	10	11	22	23	2
7	11	12	23	24	3
8	12	13	24	25	4
9	13	14	25	26	5
10	14	15	26	27	6
11	15	16	27	28	7
12	16	17	28	29	8
13	17	18	29	30	9
14	18	19	30	31	10
15	19	20	31	Feb. 1	11
16	20	21	Feb. 1	2	12
17	21	22	2	3	13
18	22	23	3	4	14
19	23	24	4	5	15
20	24	25	5	6	16
21	25	26	6	7	17
22	26	27	7	8	18
23	27	28	8	9	19
24	28	29	9	10	20
25	29	30	10	11	21
26	30	31	11	12	22
27	31	Feb. 1	12	13	23
28	Feb. 1	2	13	14	24
29	2	3	14	15	25
30	3	4	15	16	26
31	4	5	16	17	27
Feb. 1	5	6	17	18	28
2	6	7	18	19	Mar. 1
3	7	8	19	20	2
4	8	9	20	21	3
5	9	10	21	22	4
6	10	11	22	23	5
7	11	12	23	24	6
8	12	13	24	25	7

TABLE OF BARREN AND CONCEPTIVE PERIODS
Continued

Menses begin	Menses end	Fruitful period begins	Fruitful period ends	Barren period begins	Barren period ends
Feb. 9	Feb. 13	Feb. 14	Feb. 25	Feb. 26	Mar. 8
10	14	15	26	27	9
11	15	16	27	28	10
12	16	17	28	Mar. 1	11
13	17	18	Mar. 1	2	12
14	18	19	2	3	13
15	19	20	3	4	14
16	20	21	4	5	15
17	21	22	5	6	16
18	22	23	6	7	17
19	23	24	7	8	18
20	24	25	8	9	19
21	25	26	9	10	20
22	26	27	10	11	21
23	27	28	11	12	22
24	28	Mar. 1	12	13	23
25	Mar. 1	2	13	14	24
26	2	3	14	15	25
27	3	4	15	16	26
28	4	5	16	17	27
Mar. 1	5	6	17	18	28
2	6	7	18	19	29
3	7	8	19	20	30
4	8	9	20	21	31
5	9	10	21	22	Apr. 1
6	10	11	22	23	2
7	11	12	23	24	3
8	12	13	24	25	4
9	13	14	25	26	5
10	14	15	26	27	6
11	15	16	27	28	7
12	16	17	28	29	8
13	17	18	29	30	9
14	18	19	30	31	10
15	19	20	31	Apr. 1	11
16	20	21	Apr. 1	2	12
17	21	22	2	3	13
18	22	23	3	4	14
19	23	24	4	5	15
20	24	25	5	6	16
21	25	26	6	7	17

TABLE OF BARREN AND CONCEPTIVE PERIODS

Continued

Menses begin	Menses end	Fruitful period begins	Fruitful period ends	Barren period begins	Barren period ends
Mar. 22	Mar. 26	Mar. 27	Apr. 7	Apr. 8	Apr. 18
23	27	28	8	9	19
24	28	29	9	10	20
25	29	30	10	11	21
26	30	31	11	12	22
27	31	Apr. 1	12	13	23
28	Apr. 1	2	13	14	24
29	2	3	14	15	25
30	3	4	15	16	26
31	4	5	16	17	27
Apr. 1	5	6	17	18	28
2	6	7	18	19	29
3	7	8	19	20	30
4	8	9	20	21	May 1
5	9	10	21	22	2
6	10	11	22	23	3
7	11	12	23	24	4
8	12	13	24	25	5
9	13	14	25	26	6
10	14	15	26	27	7
11	15	16	27	28	8
12	16	17	28	29	9
13	17	18	29	30	10
14	18	19	30	May 1	11
15	19	20	May 1	2	12
16	20	21	2	3	13
17	21	22	3	4	14
18	22	23	4	5	15
19	23	24	5	6	16
20	24	25	6	7	17
21	25	26	7	8	18
22	26	27	8	9	19
23	27	28	9	10	20
24	28	29	10	11	21
25	29	30	11	12	22
26	30	May 1	12	13	23
27	May 1	2	13	14	24
28	2	3	14	15	25
29	3	4	15	16	26
30	4	5	16	17	27

TABLE OF BARREN AND CONCEPTIVE PERIODS

Continued

Menses begin	Menses end	Fruitful period begins	Fruitful period ends	Barren period begins	Barren period ends
May 1	May 5	May 6	May 17	May 18	May 28
2	6	7	18	19	29
3	7	8	19	20	30
4	8	9	20	21	31
5	9	10	21	22	June 1
6	10	11	22	23	2
7	11	12	23	24	3
8	12	13	24	25	4
9	13	14	25	26	5
10	14	15	26	27	6
11	15	16	27	28	7
12	16	17	28	29	8
13	17	18	29	30	9
14	18	19	30	31	10
15	19	20	31	June 1	11
16	20	21	June 1	2	12
17	21	22	2	3	13
18	22	23	3	4	14
19	23	24	4	5	15
20	24	25	5	6	16
21	25	26	6	7	17
22	26	27	7	8	18
23	27	28	8	9	19
24	28	29	9	10	20
25	29	30	10	11	21
26	30	31	11	12	22
27	31	June 1	12	13	23
28	June 1	2	13	14	24
29	2	3	14	15	25
30	3	4	15	16	26
31	4	5	16	17	27
June 1	5	6	17	18	28
2	6	7	18	19	29
3	7	8	19	20	30
4	8	9	20	21	July 1
5	9	10	21	22	2
6	10	11	22	23	3
7	11	12	23	24	4
8	12	13	24	25	5
9	13	14	25	26	6

TABLE OF BARREN AND CONCEPTIVE PERIODS

Continued

Menses begin	Menses end	Fruitful period begins	Fruitful period ends	Barren period begins	Barren period ends
June 10	June 14	June 15	June 26	June 27	July 7
11	15	16	27	28	8
12	16	17	28	29	9
13	17	18	29	30	10
14	18	19	30	July 1	11
15	19	20	July 1	2	12
16	20	21	2	3	13
17	21	22	3	4	14
18	22	23	4	5	15
19	23	24	5	6	16
20	24	25	6	7	17
21	25	26	7	8	18
22	26	27	8	9	19
23	27	28	9	10	20
24	28	29	10	11	21
25	29	30	11	12	22
26	30	July 1	12	13	23
27	July 1	2	13	14	24
28	2	3	14	15	25
29	3	4	15	16	26
30	4	5	16	17	27
July 1	5	6	17	18	28
2	6	7	18	19	29
3	7	8	19	20	30
4	8	9	20	21	31
5	9	10	21	22	Aug. 1
6	10	11	22	23	2
7	11	12	23	24	3
8	12	13	24	25	4
9	13	14	25	26	5
10	14	15	26	27	6
11	15	16	27	28	7
12	16	17	28	29	8
13	17	18	29	30	9
14	18	19	30	31	10
15	19	20	31	Aug. 1	11
16	20	21	Aug. 1	2	12
17	21	22	2	3	13
18	22	23	3	4	14
19	23	24	4	5	15

TABLE OF BARREN AND CONCEPTIVE PERIODS

Continued

Menses begin	Menses end	Fruitful period begins	Fruitful period ends	Barren period begins	Barren period ends
July 20	July 24	July 25	Aug. 5	Aug. 6	Aug. 16
21	25	26	6	7	17
22	26	27	7	8	18
23	27	28	8	9	19
24	28	29	9	10	20
25	29	30	10	11	21
26	30	31	11	12	22
27	31	Aug. 1	12	13	23
28	Aug. 1	2	13	14	24
29	2	3	14	15	25
30	3	4	15	16	26
31	4	5	16	17	27
Aug. 1	5	6	17	18	28
2	6	7	18	19	29
3	7	8	19	20	30
4	8	9	20	21	31
5	9	10	21	22	Sept. 1
6	10	11	22	23	2
7	11	12	23	24	3
8	12	13	24	25	4
9	13	14	25	26	5
10	14	15	26	27	6
11	15	16	27	28	7
12	16	17	28	29	8
13	17	18	29	30	9
14	18	19	30	31	10
15	19	20	31	Sept. 1	11
16	20	21	Sept. 1	2	12
17	21	22	2	3	13
18	22	23	3	4	14
19	23	24	4	5	15
20	24	25	5	6	16
21	25	26	6	7	17
22	26	27	7	8	18
23	27	28	8	9	19
24	28	29	9	10	20
25	29	30	10	11	21
26	30	31	11	12	22
27	31	Sept. 1	12	13	23
28	Sept. 1	2	13	14	24

TABLE OF BARREN AND CONCEPTIVE PERIODS

Continued

Menses begin	Menses end	Fruitful period begins	Fruitful period ends	Barren period begins	Barren period ends
Aug. 29	Sept. 2	Sept. 3	Sept. 14	Sept. 15	Sept. 25
30	3	4	15	16	26
31	4	5	16	17	27
Sept. 1	5	6	17	18	28
2	6	7	18	19	29
3	7	8	19	20	30
4	8	9	20	21	Oct. 1
5	9	10	21	22	2
6	10	11	22	23	3
7	11	12	23	24	4
8	12	13	24	25	5
9	13	14	25	26	6
10	14	15	26	27	7
11	15	16	27	28	8
12	16	17	28	29	9
13	17	18	29	30	10
14	18	19	30	Oct. 1	11
15	19	20	Oct. 1	2	12
16	20	21	2	3	13
17	21	22	3	4	14
18	22	23	4	5	15
19	23	24	5	6	16
20	24	25	6	7	17
21	25	26	7	8	18
22	26	27	8	9	19
23	27	28	9	10	20
24	28	29	10	11	21
25	29	30	11	12	22
26	30	Oct. 1	12	13	23
27	Oct. 1	2	13	14	24
28	2	3	14	15	25
29	3	4	15	16	26
30	4	5	16	17	27
Oct. 1	5	6	17	18	28
2	6	7	18	19	29
3	7	8	19	20	30
4	8	9	20	21	31
5	9	10	21	22	Nov. 1
6	10	11	22	23	2
7	11	12	23	24	3

TABLE OF BARREN AND CONCEPTIVE PERIODS

Continued

Menses begin	Menses end	Fruitful period begins	Fruitful period ends	Barren period begins	Barren period ends
Oct. 8	Oct. 12	Oct. 13	Oct. 24	Oct. 25	Nov. 4
9	13	14	25	26	5
10	14	15	26	27	6
11	15	16	27	28	7
12	16	17	28	29	8
13	17	18	29	30	9
14	18	19	30	31	10
15	19	20	31	Nov. 1	11
16	20	21	Nov. 1	2	12
17	21	22	2	3	13
18	22	23	3	4	14
19	23	24	4	5	15
20	24	25	5	6	16
21	25	26	6	7	17
22	26	27	7	8	18
23	27	28	8	9	19
24	28	29	9	10	20
25	29	30	10	11	21
26	30	31	11	12	22
27	31	Nov. 1	12	13	23
28	Nov. 1	2	13	14	24
29	2	3	14	15	25
30	3	4	15	16	26
31	4	5	16	17	27
Nov. 1	5	6	17	18	28
2	6	7	18	19	29
3	7	8	19	20	30
4	8	9	20	21	Dec. 1
5	9	10	21	22	2
6	10	11	22	23	3
7	11	12	23	24	4
8	12	13	24	25	5
9	13	14	25	26	6
10	14	15	26	27	7
11	15	16	27	28	8
12	16	17	28	29	9
13	17	18	29	30	10
14	18	19	30	Dec. 1	11
15	19	20	Dec. 1	2	12
16	20	21	2	3	13

TABLE OF BARREN AND CONCEPTIVE PERIODS

Continued

Menses begin	Menses end	Fruitful period begins	Fruitful period ends	Barren period begins	Barren period ends
Nov. 17	Nov. 21	Nov. 22	Dec. 3	Dec. 4	Dec. 14
18	22	23	4	5	15
19	23	24	5	6	16
20	24	25	6	7	17
21	25	26	7	8	18
22	26	27	8	9	19
23	27	28	9	10	20
24	28	29	10	11	21
25	29	30	11	12	22
26	30	Dec. 1	12	13	23
27	Dec. 1	2	13	14	24
28	2	3	14	15	25
29	3	4	15	16	26
30	4	5	16	17	27
Dec. 1	5	6	17	18	28
2	6	7	18	19	29
3	7	8	19	20	30
4	8	9	20	21	31
5	9	10	21	22	Jan. 1
6	10	11	22	23	2
7	11	12	23	24	3
8	12	13	24	25	4
9	13	14	25	26	5
10	14	15	26	27	6
11	15	16	27	28	7
12	16	17	28	29	8
13	17	18	29	30	9
14	18	19	30	31	10
15	19	20	31	Jan. 1	11
16	20	21	Jan. 1	2	12
17	21	22	2	3	13
18	22	23	3	4	14
19	23	24	4	5	15
20	24	25	5	6	16
21	25	26	6	7	17
22	26	27	7	8	18
23	27	28	8	9	19
24	28	29	9	10	20
25	29	30	10	11	21
26	30	31	11	12	22

TABLE OF BARREN AND CONCEPTIVE PERIODS

Continued

Menses begin	Menses end	Fruitful period begins	Fruitful period ends	Barren period begins	Barren period ends
Dec. 27	Dec. 31	Jan. 1	Jan. 12	Jan. 13	Jan. 23
28	Jan. 1	2	13	14	24
29	2	3	14	15	25
30	3	4	15	16	26
31	4	5	16	17	27

MUSCULAR SYSTEM, FRONT VIEW

PART IX

MEDICAL INFORMATION FOR MEN

CHAPTER XXXVII

ANATOMY OF THE BODY

THE human body is like a wonderful machine. If any of the vital parts get out of order and cannot do their work properly the harmony of the whole organism is affected. The part of medicine dealing with the physical structure of man is called anatomy. It is the very foundation of the medical science and to understand the functions of the whole organism it is necessary to know the details of its framework. Anatomy describes all parts of the body in a state of repose; physiology deals with their functions.

The physical structure of the body consists of bones, muscles, cartilages, ligaments, tendons, brain and nerve matter, integumentary and membranous tissue and of the organs of the circulatory system, heart, arteries, veins, and capillaries; the respiratory system, lungs, larynx, trachea and bronchial tubes; the digestive tract, teeth, pharynx, aesophagus, stomach, intestines, liver, pancreas and spleen; the urinary organs and the organs of sense perception.

THE BONES AND JOINTS

The bones, of which there are 206, consist of one-third organic or animal matter, and two-thirds inorganic or earthly matter. Blood vessels and nerves are very numerous in the bones. Their function is to support the body and protect the internal vital parts from injury. The bones are, in the higher order of animals, including man, inside of the body, and in the lower order, known as crustacea as lobsters, crab, etc., they are on the outside. The periosteum, a membrane, covers all the bones.

The skull also called cranium consists of eight bones. They are formed of the inner and outer plates which are united by a mass of bony matter.

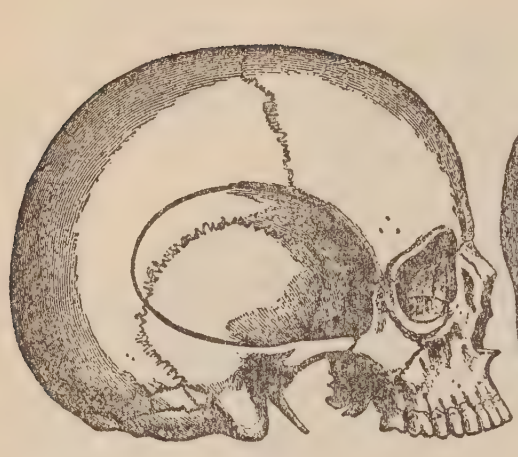


FIG. I. SKULL

FIG. II. UPPER JAW

The parts of the cranium are joined by ragged edges, called sutures. In childhood these seams are indistinct, but from the age of 35 or 40 they are clearly marked and in old age hardly visible.

The *face* is made up of fourteen bones and there are four small bones in each ear.

The trunk is composed of fifty-four bones, 22 ribs, 24 bones in the spinal cord, 4 in the pelvis and two bones are situated at the base of the tongue. The bones of the trunk in conjunction with the soft parts form two cavities, the thorax or chest and the abdomen. The thorax is protected by the sternum in front, the ribs at the sides, and the bones of the spinal column in the rear. The seven upper ribs are connected and are called the "true ribs," the next three are not attached to the sternum and are called "false ribs." The spinal column consist of 24 bones, each of which is termed a vertebra. Each of these bones has seven projections, called processes. The large portion of the vertebra, called the body, is round and spongy, the processes are dense and are so arranged with the bodies of the vertebrae as to form a canal which contains the spinal cord, the medualla spinalis.

The cartilage, the material between the vertebrae, is an elastic substance, facilitating the bending movements of the back.

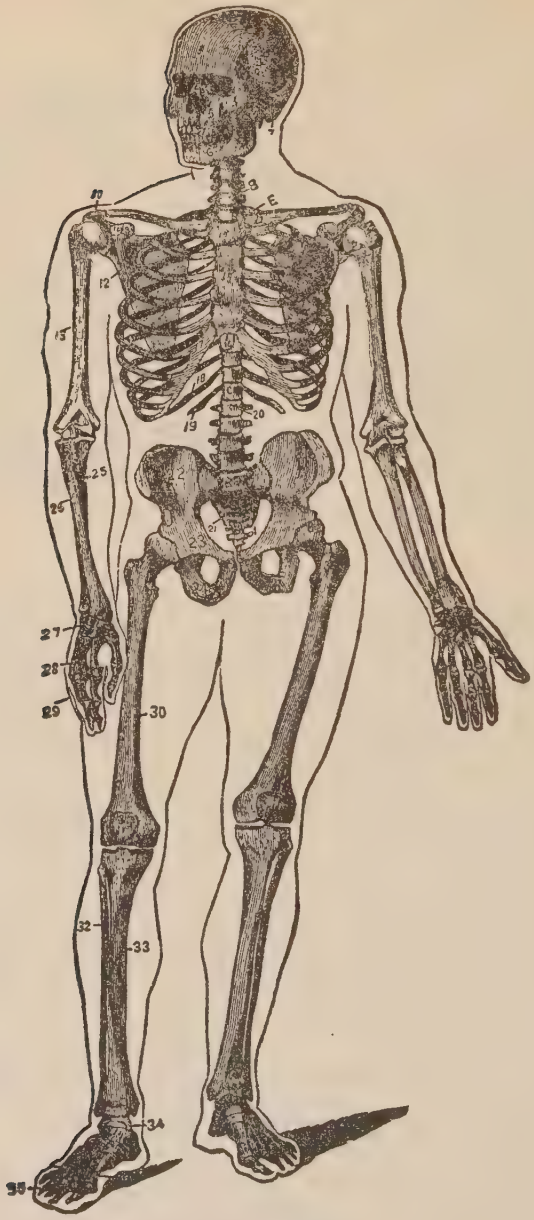
The upper portion of the structure contains 64 bones: the clavicle or collar bone, the scapula, or shoulder blade, the humerus, the bone of the upper arm, the ulna and radius, bones of the forearm, the carpus, or wrist, the metacarpus, palm of the hand, and the phalanges, or fingers. The lower extremities are composed of 60 bones: the femur, thigh bone, the patella, knee bone, the tibia, shin bone, the fibula, small bone of the leg, the tarsus, instep, the metatarsus, middle of foot, and the phalanges, toes.

The joints of the body are composed of the extremities of two or more bones and of cartilages and the synovial membrane. Cartilages are flexible and elastic substances. Ligaments are bands of various shapes, consisting of white fibrous tissues and serve to connect the extremities of the bones constituting the different joints of the body.

THE MUSCLES

The muscles are the organs which produce the various movements of the body. They are made up of masses of reddish fibres equipped with the power of expanding and contracting. Each fibre bundle consists of a number of small fibres, each of which repose in a delicate encasing. There is another kind of muscle that is not made of fibres, but of flat bands, each of which consists of long spindle-shaped cells. This muscle, tiny and pale, is found in the walls of the arteries of the stomach and the bowels and in some other internal parts. The tendons are the substance by which the muscle is fastened to the surface of the bone. The tendon is so securely joined to the bone, that under the most severe strain, the latter will sooner break than permit the former to tear loose from its attachment.

The muscles are divided into two kinds, the voluntary and involuntary. The voluntary muscles look very different from the involuntary under the microscope; they are made of number of plates piled one on top of the other and held together so as to form long cylinders called fibres. Each of these fibres averages about one inch in length, though in some muscles the fibre may be as much as five inches long. They vary somewhat in thickness,



SKELETON

the thickest of them being 1/250 while the thinnest may be 1/10 this thickness. In men the fibres are thicker and closer together than in women. When the muscles contract these fibres increase in thickness and become shortened. The muscles are all well supplied with blood. There are interesting processes connected with the nutrition of the muscle which it will be impossible to go into here, but the nourishment of the muscles differs very much from the nourishment of other tissues of the body. The muscles are also abundantly supplied with nerves.

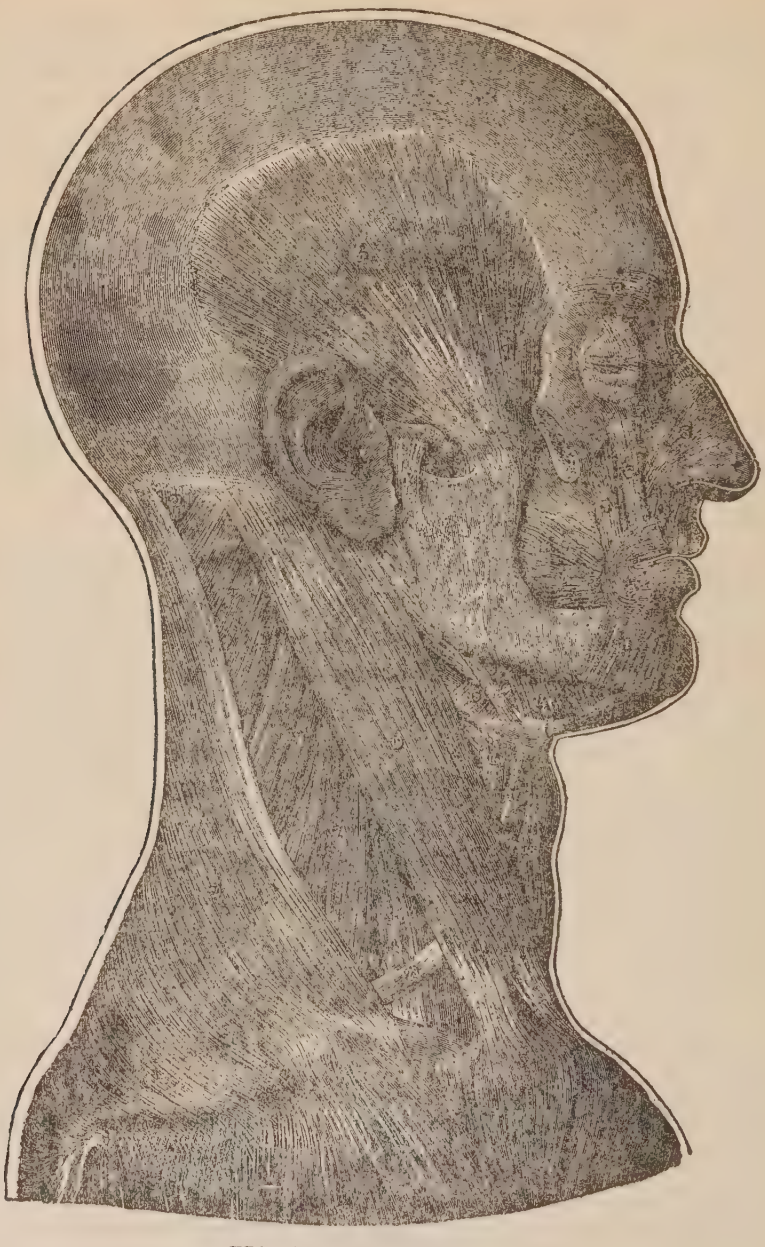
Involuntary Muscles:

These are not made up of plates such as we described in connection with the voluntary muscles. They are perfectly smooth and connected with each other in layers. They are found everywhere in the hollows and tubes of the body and act automatically. We have no control over their action. The muscles are endowed with a peculiar power known as contractility, that is, a shortening of their substance on the application of a proper stimulus, and again a relaxing when the stimulus ceases to act. If the muscles that raise the arm are called into action, the hand and arm are elevated; if this influence is withdrawn by an effort of the will the muscles relax. All the joints of the system are moved on this principle. In the movement of various joints the number of muscles brought into play differs. The hinge joint of the elbow, for instance, has two sets of muscles: one to bend the joint, the other to extend the limb. The ball and socket joints have a more extensive range of movement. The functions of the various muscles in the economy of the human body are manifold, indeed. They are necessary to the activities of the digestive organs, the circulation of the blood, etc.

THE CIRCULATORY ORGANS

The organs composing this system are the heart, arteries, veins and capillaries.

The muscle of the heart is peculiar. It is made up of muscles that look under the microscope like voluntary muscles, but they are not under control of the will so that they act like involuntary muscles. There have been, it is true, a few persons known who demonstrated that they have the power

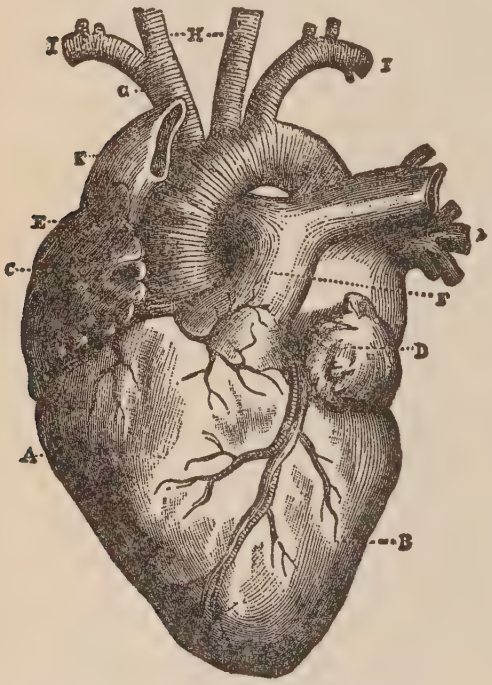


HEAD AND NECK, SECOND LAYER

HEAD AND NECK, SECOND LAYER

ANATOMICAL NAME	USE OF MUSCLE
1. Temporal muscle.	1. Raises lower jaw.
2. Corrugator supercilii.	2. Moves the eyebrow.
3. Pyramidalis nasi.	3. Forms bridge of nose.
4. Levator labii superioris alæque nasi.	4. Forms side of nose.
5. Compressor nasi.	5. Changes shape of nose.
6. Levator labii superioris proprius.	6. Raises upper lip.
7. Levator anguli oris.	7. Pulls up angle of mouth.
8. Depressor alæ nasi.	8. Pulls down middle of nose.
9. Orbicularis oris.	9. Forms outline of mouth.
10. Buccinator.	10. Stretches mouth sideward.
11. Depressor labii inferioris.	11. Pulls down lower lip.
12. Levator menti (or levator labii inferioris).	12. Forms shape of chin.
13. Digastric.	13. Pulls down lower jaw.
14. Mylo-hyoid.	14. Raises hyoid bone.
15. Hyo-glossus.	15. Branch of Muscle No. 14.
15*a*. Stylo-hyoid.	15*a*. Branch of Muscle No. 15.
16. Thyro-hyoid.	16. Raises thyroid gland.
17. Anterior belly of omo-hyoid.	17, 18. Lower hyoid bone.
18. Sterno-hyoid.	
19. Sterno-mastoid.	19. Turns head sideward.
20. Trapezius.	20. Raises head upward.
21. Complexus.	21. Aids in pulling head backward.
22. Splenius.	22. Holds head erect.
23. Levator anguli scapulæ.	23. Raises shoulder-blade.
24. Scalenus medius.	24. Turns head sideward.
25. Scalenus anticus.	25. Branch of Muscle No. 24.
26. Deltoid .	26. Lowers the collar-bone.
27. Clavicular fibers of pectoralis major.	27. Large muscles of chest.
28. Posterior belly of omo-hyoid.	28. Lowers the hyoid bone.

of controlling the heart beat, but this is a biological abnormality. The heart is in shape like an inverted cone, having two separate sides, divided on each side into two cavities, the auricles and the ventricles. This muscle is surrounded by a membranous sac, the pericardium, and lined by a membrane known as the endocardium. Within the heart are valves to prevent the blood from flowing back from the arteries into the heart and from the heart into the veins as the valves in a pump prevent the water from flowing back into the well when the piston is lowered. The left auricle receives from the lungs the fresh, bright red blood through the pulmonary veins. From the left auricle the blood passes into the left ventricle and is then distributed through the systemic arteries to the liver, kidneys, intestines, and other parts of the body, finally reaching the capillaries.



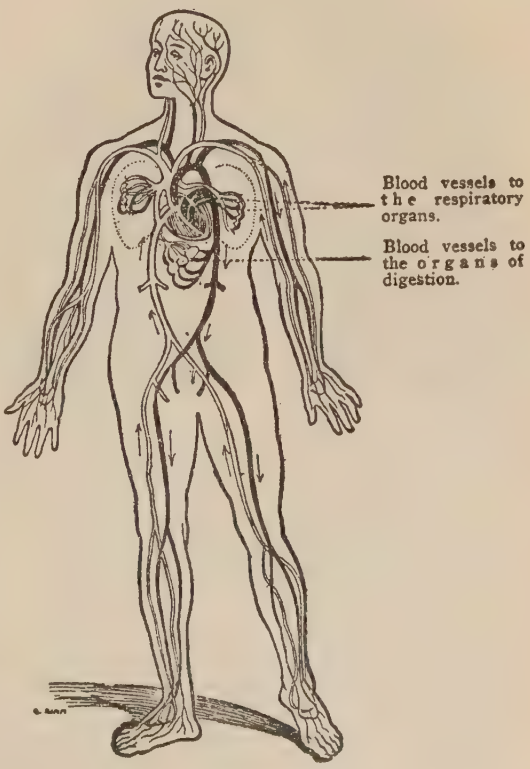
HEART, WITH TRUNKS OF PRINCIPAL ARTERIES AND VEINS

A, Right ventricle. *B*, Left ventricle. *C*, Right auricle. *D*, Left auricle. *E*, Aorta. *F*, Pulmonary artery. *G*, Branchio-cephalic trunk. *H*, Carotid, right and left. *I*, *I*, Subclavian arteries. *K*, Superior vena cava. *L*, Pulmonary veins.

The Portal Veins carry the blood to the liver, where bile is formed and important changes effected in the blood. Returning from the various organs and the body tissues, through the systemic veins, it carries with the carbonic acid given off during the waste of tissue and imparting to it a dark color. The dark-red blood finally reaches the heart again through the Heptic Veins which empty it into the right auricle. It then passes into the right ventricle, which pumps it through the pulmonary arteries into the lungs. Here it is purified by contact with the

oxygen of the air, and thus revivified is returned through the pulmonary capillaries and veins to left auricle.

The arteries are the distributers of the blood from the heart to all parts of the body. They are of cylindrical shape, firm in structure and composed of three layers: the external or cellular coat, which is strong and dense; the middle, or fibrous layer that is delicate in structure and elastic; and the internal layer, a thin serous membrane with a smooth surface facilitating the easy flow of blood. The pulmonary artery begins in front of the aorta, where it separates into two branches, one of which continues to the right lung, the other to the left. These branches, after numerous other divisions and subdivisions, end in the capillary vessels that surround the air cells. The aorta rises from the left ventricle of the heart, accompanying the ramifications of the various divisions, thus forming the great arterial and capillary system that penetrates every part of the organism. The veins, as already stated, are the vessels through which the blood flows back to the auricles of the heart, after having passed through the tissues of the frame.



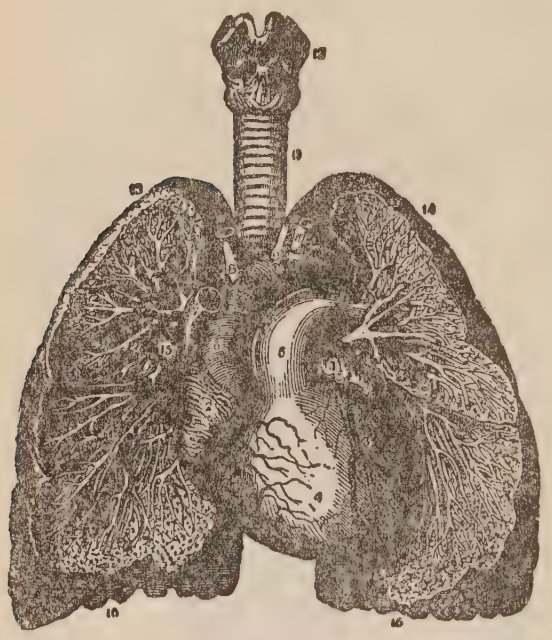
They are thinner and more fragile in their make-up than the arteries and become flattened when emptied of their blood.

The capillaries form a very intricate network, diffused through the entire body and it is impossible to prick the skin with the finest needle-

point without injuring one of these ubiquitous hair-like vessels. They are united, on one hand, to the extreme ends of the arteries and on the other, to the beginning of the veins. Besides serving as links between arteries and veins, they perform also the function of operating the secretion and the conversion of building materials into the tissues of the body.

THE RESPIRATORY SYSTEM

The lungs are two large spongy organs within the pleurae (pleurae, a Greek word, the name for a delicate serous membrance covering the interior of the thorax and each lung) occupying the cavity of the thorax on each side of the mediastinum and separated from each other by the heart.



A VIEW OF THE BRONCHIA AND BLOOD-VESSELS OF THE LUNGS AS SHOWN BY DISSECTION, AS WELL AS THE RELATIVE POSITION OF THE LUNGS TO THE HEART.

1. End of the Left Auricle of the Heart.
2. The Right Auricle.
3. The Left Ventricle with its Vessels.
4. The Right Ventricle with its Vessels.
5. The Pulmonary Artery.
6. Arch of the Aorta.
7. Superior Vena Cava.
8. Arteria Innominata.
9. Left Primitive Carotid Artery.
10. Left Subclavian Artery.
11. The Trachea.
12. The Larynx.
13. Upper Lobe of the Right Lung.
14. Upper Lobe of the Left Lung.
15. Trunk of the Right Pulmonary Artery.
16. Lower Lobes of the Lungs.

The color of the lungs varies even in health from a pale-pinkish hue to a mottled gray. Each lung has a rounded apex (tip) extending into the root of the neck, and a concave base.

The right lung is thicker and shorter than the left. Each lung is divided in an upper and lower lobe by a great fissure. The roots of the lungs are attached to the bottom of a deep cleft, the hilum, situated above the middle of each lung.

The bronchi (branches of the windpipe) vary in

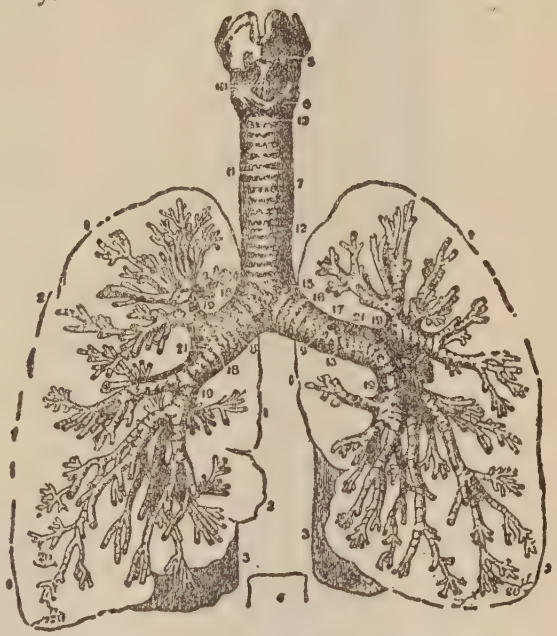
length, direction and diameter. The right bronchus is about an inch in length, the left is about one inch longer.

At the root of the lungs the bronchi subdivide into two branches, the bronchial tubes corresponding to the primary lobes of the lung. The right bronchus at the root of the right lung is behind the right pulmonary artery and the left bronchus also holds the same relative position, being behind the corresponding pulmonary artery.

The pulmonary and bronchial vessels, the lymphatics and the nerves, all accompany the ramifications of the bronchial tubes and are united to them by connective tissue, the arteries always being behind and the veins in front of the tubes.

The remarkable expansibility of the lungs depends upon the elastic tissue of the air vesicles.

The terminal branches of the pulmonary artery form a network of capillary vessels. The pulmonary lymphatic vessels are very numerous and are arranged is superficial and deep sets. The deep lymphatic vessels terminate in the pulmonary lymphatic glands, situated along the walls of the smaller bronchial tube. There are about forty in the right lung and thirty in the left.



THE LARYNX, TRACHEA AND BRONCHIA, DEPRIVED OF THEIR FIBROUS COVERING, AND WITH THE OUTLINE OF THE LUNGS.

1, 1. Outline of the Upper Lobes of the Lungs.
2. Outline of the Middle Lobe of the Right Lung.
3, 3. Outline of the Inferior Lobes of both Lungs.
4. Outline of the 9th Dorsal Vertebra, showing its relation to the Lungs and the Vertebral Column.
5. Thyroid Cartilage.
6. Cricoid Cartilage.
7. Trachea.
8. Right Bronchus.
9. Left Bronchus.
10. Crico-Thyroid Ligament.
11, 12. Rings of the Trachea.
13. First Ring of the Trachea.
14. Last Ring of the Trachea, which is Corset-shaped.
15, 16. A complete Bronchial Cartilaginous Ring.
17. One which is Bifurcated.
18. Double Bifurcated Bronchial Rings.
19, 19. Smaller Bronchial Rings.
20. Depressions for the Course of the large Blood-Vessels

Fig. I Fig. II

FOREARM AND HAND, BACK AND SIDE VIEW

FOREARM AND HAND, BACK AND SIDE VIEWS

Fig. I

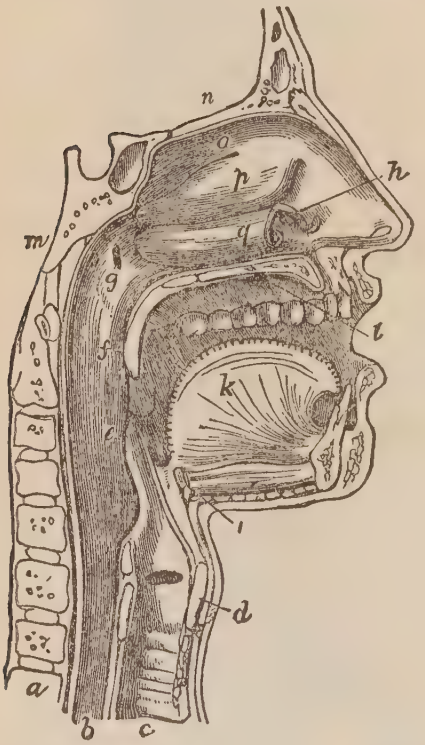
ANATOMICAL NAME	USE OF MUSCLE
1, 2. Brachialis anticus.	1, 2. Raises the forearm.
3. Origin of (4) extensor carpi radialis brevior.	3, 4. Extends the forearm.
5. Supinator brevis.	5. Rotates the forearm.
6. Extensor ossis metacarpi pollicis.	6. Closes the fingers.
7. Extensor primi internodii pollicis.	7, 8. Extends the thumb out.
8. Extensor secundi internodii pollicis.	
9. Extensor indicis.	9. Extends the index-finger.
10. Flexor carpi ulnaris.	10, 11. Rotate the hand.
11. Origin of Muscle No. 10.	
12. Flexor digitorum profundus (ulnar origin).	12. Closes the fingers.
13, 14. Abductor indicis, or first dorsal interosseous muscle.	13, 14. Pulls index-finger to the thumb.
15, 16. } Dorsal interosseous muscles.	15, 16. } Move the fingers.
17, 19. }	17, 19. }
18, 20. }	18, 20. }

Fig. II

ANATOMICAL NAME	USE OF MUSCLE
1. Biceps.	1, 2. Bend the elbow.
2. Brachialis anticus.	
3. Supinator radii longus.	3. Rotates the forearm.
4. Triceps.	4. Straightens out the arm.
5. Brachialis anticus.	5. Bends the elbow.
6. Extensor carpi radialis longior.	6. Straightens out the finger and bends wrist backward.
7. Extensor carpi radialis brevior.	7, 8, 9, 10. Similar to Muscle No. 6.
8. Extensor communis digitorum.	
9. Extensor proprius minimi digiti.	
10. Extensor carpi ulnaris.	
11. Anconeus.	11, 12. Rotate the forearm.
12. Pronator radii teres.	13. Bends the fingers.
13. Flexor carpi radialis.	14, 15, 16. Draw back the thumb.
14. Extensor ossis metacarpi pollicis.	
15. Extensor primi internodii pollicis.	
16. Extensor secundi internodii pollicis.	
17. Tendon of extensor indicis or indicatator.	17. Pulls out the index-finger.
18. Opponeus pollicis.	18. Draws the thumb sideward.
19. Abductor indicis, or first dorsal interosseus.	19. Draws index-finger to thumb.

The pulmonary nerves enter the lungs with the bronchial tubes and go along with them in their ramifications.

The process of respiration supplies the system with the oxygen thus vitalizing the tissues; its second object is the elimination of waste material. Breathing consists of two actions, inspiration, produced by the raising of the ribs and the depression of the diaphragm, while in exspiration the process is reversed. It is estimated that the quantity of air an average sized man inhales is about 40 cubic inches. When in a state of repose the lungs contain about 390 cubic inches of air. The average number of respirations per minute in the adult is about eighteen.



A SECTION OF THE MOUTH AND NOSE TAKEN VERTICALLY A LITTLE TO THE LEFT OF THE MIDDLE LINE.

a, the Vertebral Column. *b*, the Gullet. *c*, the Windpipe. *d*, the Thyroid Cartilage of the Larynx. *e*, the Epiglottis. *f*, the Uvula. *g*, the opening of the left Eustachian Tube. *h*, the opening of the left Lachrymal Duct. *i*, the Hyoid Bone. *k*, the Tongue. *l*, the Hard Palate. *m*, *n*, the base of the Skull. *o*, *p*, *q*, the Superior, Middle, and Inferior Turbinal Bones. The letters *g*, *f*, *e*, are placed in the Pharynx.

THE DIGESTIVE SYSTEM

The organs constituting this system are: the mouth, teeth, salivary glands, pharynx, aesophagus, stomach, intestines, liver and pancreas.

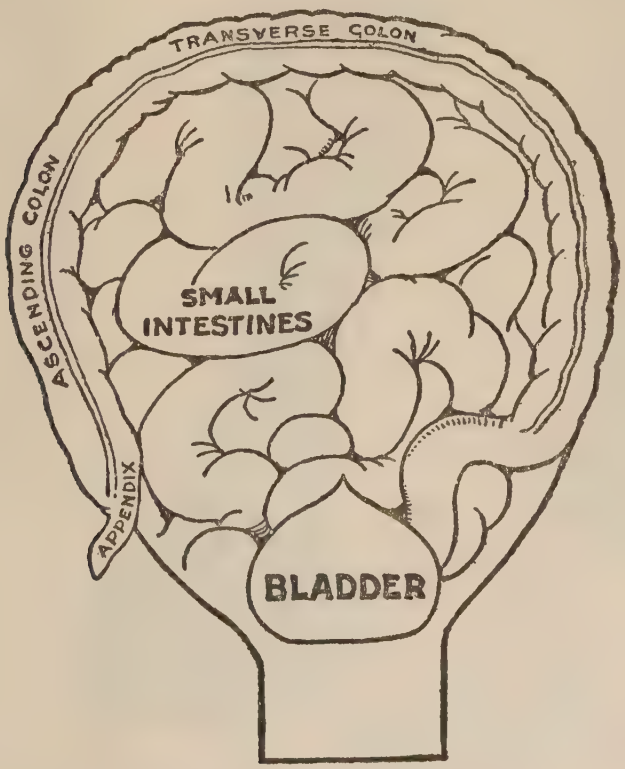
Digestion means the change of food we eat into such shape that it can be taken up by the blood and used for the nutrition of the body. The first set of teeth in human beings arriving in infancy is temporary, while the second set is permanent; the latter consists of 32 teeth, the first of 20. A tooth is made of two substances, the dentine and the enamel. Each tooth consists of crown and root. The crown is the visible part; the root reposes in the sockets of the jaw. The four front teeth are called the incisors,

the next tooth on each side, the cuspids (eye teeth), the two next bicuspids (small grinders), the two next molars. The last one on each side to arrive is the wisdom tooth.

The *pharynx* is the back part of the mouth, and has several passages, of which one opens upward to the nose, and the others lead downward to the lungs and stomach.

The *salivary glands:* They are six in number, three on each side of the jaw. The aesophagus, or gullet, is a large tube connecting the throat with the stomach.

The *stomach,* the principal organ of digestion, is a sack the walls of which are composed of a layer of muscles and the inside is covered with



THE LARGE AND THE SMALL INTESTINES

FIG. II

FIG. I

FIG. III

FOREARM AND HAND

FOREARM AND HAND

FIG. I. A study, from life, of the outer surface of the arm.

FIG. II

BONES

ANATOMICAL NAME	ORDINARY NAME
A. Ulna.	A. Bone of the forearm.

MUSCLES

ANATOMICAL NAME	USE OF MUSCLE
1. Extensor communis digitorum.	1, 2. Open up the hand.
2. Tendon of the above about to divide to the fingers.	
3. Extensor proprius minimi digiti.	3. Pulls small finger backward.
4. Extensor carpi ulnaris.	4. Pulls the ring finger backward.
5. Anconeus.	5. Surrounds the elbow-joint.
6. Supinator longus.	6. Rotates the forearm.
7. Extensor carpi radialis longior.	7, 8. Pull thumb outward.
8. Its tendon.	
9. Extensor carpi radialis brevior.	9, 10. Pull thumb backward.
10. Its tendon.	
11. Abductor pollicis longus.	11, 12. Extend the thumb.
12. Abductor pollicis brevis.	
13. Tendon of extensor longus pollicis.	13. Pulls thumb backward.
14. Extensor longus pollicis.	14, 15. Pull thumb sideward.
15. Its tendon passing under the annular ligament.	
16. The annular ligament.	16. Fibrous band around the wrist.
17. Biceps.	17. Raises the forearm.
18. Brachialis anticus.	18, 19. Rotate the forearm.
19. Brachialis anticus, internal portion.	
20. Triceps.	20. Raises the elbow up.
21. Flexor carpi radialis.	21. Closes the fingers.
22. Pronator teres.	22. Rotates the forearm.

FIG. III

BONES

ANATOMICAL NAME	ORDINARY NAME
A. Ulna.	A. Bone of the forearm.
B. Fifth metacarpal bone.	B. Head of the finger-bone.
C. Thumb.	C. Thumb.

MUSCLES

ANATOMICAL NAME	USE OF MUSCLE
1. Flexor carpi ulnaris.	1, 2, 3. Close the hand.
2. Fibers of flexor digitorum profundus.	
3. Tendon of flexor carpi ulnaris.	
4. Extensor carpi ulnaris.	4, 5. Pull index-finger backward.
5. Its tendon.	
6. Tendon of extensor minimi digiti.	6. Extends the index-finger.
7. Extensor communis digitorum.	7, 8, 9, 10. Pull all the fingers backward.
8. Its tendon passing behind the annular ligament.	
9. The same tendon dividing to pass to the phalanges.	
10. Similar to above.	
11. Muscles of the thumb.	11. Muscles of the thumb.
12. Annular ligament.	12. Fibrous band around the wrist.
13. Extensor minimi digiti.	13. Extends the middle finger.
14. Abductor minimi digiti.	14, 15. Close the middle finger.
15. Its tendinous attachment.	

mucous membrane. The muscles keep the stomach in constant motion during digestion. The food is pressed and rolled and thrown about so as to mix it with the juice of the stomach, which digests the albumen of the food and converts it into peptone. The peptone supplies the flesh of the muscles. The stomach juice is produced by a great number of small glands. The stomach at one end is connected with aesophagus, and at the other with the small intestine.

The *intestines* are divided into small and large. The small gut or intestine is a long narrow tube which begins at the right end of the stomach and ends in large gut at the lower part of the abdomen on the right side just above the groin. The average length of the small testine is about 20 feet, though it varies in different individuals. It is divided into three parts: duodenum, jejunum and ileum. The large intestine is about five feet long. It begins in the right lower part of the abdomen near the groin and runs up to the liver, thence goes straight across to left and from there to the anus. The function of the large intestine is merely to eliminate the waste material which has not been digested in the body. It is like the small testine, also divided into three parts, caecum, colon and the rectum. The greatest interest which we have from a medical point of view in the large intestine is the fact that at one point, near the beginning there is a long worm-like body that branches off from it, called the vermiform appendix. As every one knows the appendix is quite often inflamed and causes what we know as appendicitis.

The *liver* is the largest gland in the body. It is composed of large flat cells which have the power of secreting a fluid that converts the fat in the body into soap. Very little, if any, of the fat contained in the food can be taken up and utilized by the body until it has been changed into soap. It is absorbed by the intestines after it has been thus changed. The liver is situated toward the right side of the abdominal cavity and is held in position by several ligaments. Its secretion called bile is collected in a bladder which is a sack a few inches long and about one inch thick situated on the under side of the liver.

The *pancreas* is a gland with a tube or duct running through the

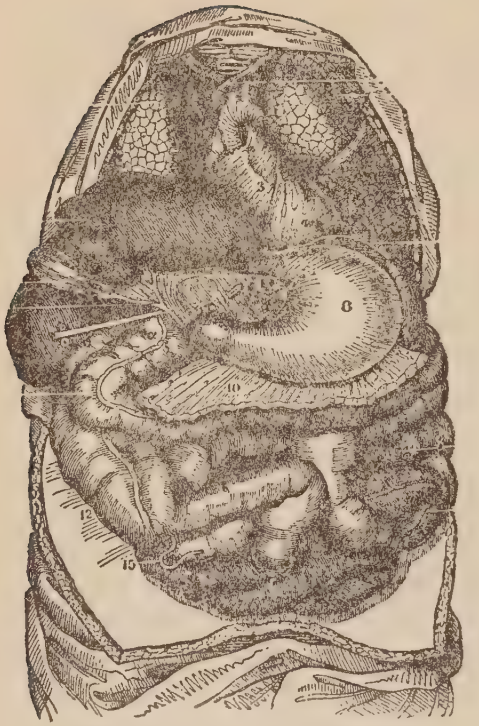
middle of it. It is about six inches in length, weighs three or four ounces and is situated at the back of the abdomen behind the stomach. The duct of the pancreas joins the bile duct and opens with it about three inches below the end of the stomach. The pancreatic juice digests all the three elements of the food, the starch, albumen and fat.

The pancreas also has control over the burning up of the sugar in the tissues.

The *spleen* is an organ the function of which in the body is still somewhat of a mystery, it is an oblong flattened organ, situated on the left side and connected with the diaphragm, stomach and the pancreas. It is of dark-bluish hue, is abundantly supplied with blood, but has no duct or tube to serve as outlet for any secretion.

As we have already stated the food must undergo many changes in the stomach before it can be utilized by the body cells. The process of digestion and absorption of the food begins with chewing (mastication). The cavity of the mouth is composed of the hard palate the roof, the tongue and the soft palate in the back of the cavity the middle of which is a small cone-like prolongation, called the uvula, while its sides are made up by what are styled the pillars of the fauces, between these on each side are the tonsils. When the food reaches the stomach the starchy matter continues to be acted upon for a while; but after half an hour or more enough of the acid digestive juice of the stomach is poured out to stop the action of the saliva, and the true stomach digestion of what are called the proteids of the food begins. In the meantime the stomach is continually contracting in wavelike movements which mix the food well with the digestive fluid or gastric juice, a colorless fluid of saltish taste, inodorous and strongly acid. Under the influence of this juice the starch in the food begins to be changed to sugar, a change already begun in the mouth by the action of the saliva. By the movements of the stomach the food, a little at a time, is forced onward into the bowels where the most important part of the digestions occurs.

Into the bowels, flow through a duct or tube the secretions of the liver and pancreas, and these with the bile and the pancreatic juice, assisted by the secretions from the walls of the intestines complete the process of di-



THE STOMACH AND THE INTESTINES

gestion. The intestinal digestion according to the best authorities, is much more important than that of the stomach, a fact that has been proven by the comparative health enjoyed by persons after removal of the stomach. While only starchy matter is partially digested by the saliva and the proteid element is partially digested by the stomach, the intestinal juices are capable of digesting all the elements contained in food. Summing up we repeat by digestion is meant a change brought about by both mechanical, chemical and vital actions whereby the food is reduced into a fluid state and the insoluble part so altered in chemical nature as to become soluble and therefore capable of being absorbed by the blood.

THE NERVOUS SYSTEM

This system consists of the *brain* and the *spinal* cord, the *cranial nerves,* the *spinal nerves* and the *sympathetic* nerve.

Our illustrations show some of the lobes of the Cerebrum, the Cerebellum the Medulla Oblongata, and certain arteries of the brain. These parts are protected and surrounded by the membranes of the brain. The cerebrum is divided by a fissure into two hemispheres which are connected by a firm layer of fibres called "corpus collosum." The substance forming the brain is of a pulp nature, very soft in early childhood, but gradually growing denser. It contains more blood than any other organ of the body.

The large arteries that distribute blood to all parts of the brains unite and form an irregular ring, known as the "circle of Willis," seen in second figure showing lower surface of the brain. A rupture of any of these arteries or ramifications causes apoplexy or cerebral hemmorrhage.

The internal Carotis Arteries, which ascend along the side of the neck divide to form the middle cerebral, the anterior Cerebral and the posterior communicating arteries.

The *medulla oblongata* is that part of the brain which is continuous with the spinal cord; it is united with the rest of the brain by the "pons varolii." The Olfactory nerves convey the sense of smell, the optic nerves that of sight.

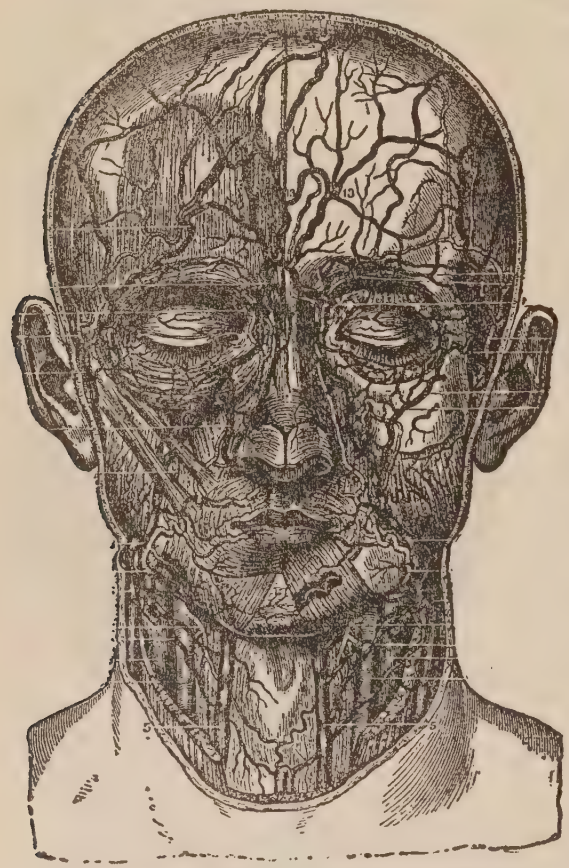
There are several hollows in the interior of the brain, two of which are quite large and known as the lateral ventricles.

As the cerebrum the cerebellum, larger than the first, is composed of white and gray matter. Its position is under the posterior lobe of the cerebrum. On the surface of the brain are seen wavelike arrangements which are called *convolutions*.

THE CEREBRUM

The cranial nerves are arranged in twelve pairs, one of which we have already referred to: The olfactory, the optic, the motore oculi, the patheticus, the trifacial, the abducenter, the portio dura, the portio mollis, the glosso-pharyngal, the pneumogastric, the spinal accessory, the hypoglossal. The nerves are like the wires of a telephone, between the central

station and the outside. They are round white fibres which run from the brain to all parts of the body to the muscles of the glands and the blood vessels. Each nerve is made up of a large number of fibres which are held together in a sheath and each one of the fibres contained therein comes off from a nerve cell situated in the brain, though in some cases where the nerve controls involuntary action there is an intermediate station from which the nerve receives the impulse. There are two kinds of impulses conveyed by the nerves: motion and sensation, and the impulses run both ways, away from the brain and back to it. The motor impulse controls the action of the muscle and causes it to contract and to relax. It further controls the secretion of the glands either compelling them to give off their secretions or preventing the glands from the secreting. It controls the flow of the blood making it rapid or slowing down as the case demands.



ARTERIES AND VEINS OF THE FACE AND NECK

In addition to the nerves we have described there are nerves of what we call "special sense." The optic nerves pass from the interior of the cranium through an opening in the base of the skull to the interior of the eye and there they spread out like a brush. The ends of the brush con-

stitute what is known as the retina of the eye and when light strikes these nerve endings the sensation of color is aroused. It is probable that this is all that the eye can perceive, merely an impression of light, and we learn by experience the shape of the objects through the shadows and shades of light. The auditory nerve, runs from the base of the brain into the ears where it ramifies. The olfactory nerve, the nerve of smell, passes from the cavity of the skull through a number of small openings into the nose. The glosso-pharyngal nerve, nerve of taste, passes from the brain to the mucous membrane lining the tongue and throat and also to the mucous glands of the mouth.

The spinal nerves that connect with spinal cord are arrayed in thirty-one pairs. The sympathetic nerve is composed of a number of ganglia (knots) along each side of the spinal column forming a chain-like arrangement in its entire length. Their purpose is to act as centers from which the ramifications arise to continue in all directions accompanying certain arteries that supply the various organs.

Physiology of the Nervous System: According to the consensus of opinion the cerebrum is the organ of the higher faculties of the mind, such as the will, memory, conception, perception, etc., while the cerebellum, or little brain, is regarded as the seat of the lower properties of mind. The brain is also the seat of sensation. Nerve sensations are produced in various ways: by heat, by chemicals and by electricity. The nerves may be oversensitive or undersensitive and conditions of this kind are brought about by diseases.

The nerves arising from the right side of the spinal cord communicate with left hemisphere of the brain and vice versa with the opposite side. Therefore, when the right side of the brain is injured, the left side of the body is paralyzed. The nerves may be divided into five groups: Nerves of general sensation, nerves of motion, nerves of respiration, the sympathetic nerve and the nerves of special sensation, sight, hearing, smell, taste and touch.

Many experiments have been made to find out how quickly the nerve

impulse is conducted along a nerve. Experimenting on frogs it was ascertained that the rate at which the impulse runs from the brain to the foot varied from 27 to 30 yards a second; but these impulse-rates differ greatly according to different individuals. A nerve is composed of from 57 to 64% water and the rest is solid material.

In the economy of the nervous system the sympathetic nerve is of great importance due to its influence upon the entire system. Following its ramifications accompanying the blood-vessels through the body we meet with its influence everywhere. The functions of the cranial and spinal nerves are so manifold that it would almost require a volume instead of a chapter to give a detailed account of their work.

Our object was to give a brief description of their anatomy in general terms thus enabling the reader to get an idea of the wonders of our body.

THE SPECIAL SENSE ORGANS

The *skin* is not merely a protective covering of the whole body but, in a sense, an organ, besides being the seat of the sense of touch. It produces oil, hair, nails, it has diseases of its own and it is almost always affected when other parts of the body suffer. In composition it is a tough flexible membrane. The thickness of the skin varies. It is composed of three layers, the epidermis, which is the external layer, under this is the corium, the true skin and the third layer under the corium is called the subcutaneous tissue. The epidermis, also known as cuticle, is a membrane composed of epithelial cells. It has two main and two minor layers.

The deepest of the layers of the epidermis, the mucous, is the most important layer, because it is the living stratum, the one which produces. Under the epidermis is the corium, the most important of the skin. In it are embedded the elastic fibres, the blood vessels, nerves, lymph vessels, muscles, hairs, oil, sweat and fat glands. The elasticity of the skin as a whole is chiefly dependent upon the elastic fibres of the true skin. A healthy complexion is the product of these fibres.

If they are diseased the skin sags or wrinkles. The upper part of the corium contains the papillae, of which there are two kinds: the vascular

and sensory. The former are supplied with blood-vessels and have to do with the nourishment of the skin and the hair follicles; the latter contain nerves. On the finger tips this sensory papillae are most numerous imparting the delicate sense of touch. On the average finger tip there are about 400 papillae to 1-12 square inch of surface, or nearly 4,800 to the square inch. Beneath the corium is the network of the subcutaneous tissue containing blood vessels, nerves, sweat glands and the bases of hair follicles. The subcutaneous tissue serves as a cushion for the delicate blood-vessels and nerves and in addition it serves as regulator of the body temperature. In the epidermis is a deposit of pigments that gives the skin its color. Pigment-cells are also found in the corium. In white races pigment in the corium occurs mostly in the more deeply colored parts of the body, while in the colored races almost all parts of the corium are pigmented. These cells are more developed in the colored races than in the white. The oil or sebaceous glands are in the corium. They produce an oily fluid that lubricates the skin thus protecting it from the atmosphere.

The largest of all sebaceous glands are the "Meibomian" in the borders of the eyelids. The hair consists of a root, shaft and point. According to Dr. Lange, a well known European Dermatologist, there are about 1,000 hairs to the square inch of the average scalp, or 120,000 to the entire scalp. The secretion of the sebaceous glands called sebum, is to keep the skin greased and to lubricate the hair. The sweat glands are also found in all portions of the skin. They open upon the surface of the skin through their duct with orifices which are called pores. Sweat glands are most numerous on the palms and soles and are especially large in the armpits.

Taste: The organ of taste is the *tongue,* though the lips, the palate and the inner surfaces of the cheeks are associated with its production. The sense of taste is produced by the gustatory nerve while the hypo-glossal nerve gives the tongue its mobility. In the surface of the tongue are imbedded the papillae and it also abounds with blood-vessels and nerves. Without this sense we could not enjoy our food and appreciate the masterworks of gastronomy.

The number of different tastes is very limited. We distinguish four

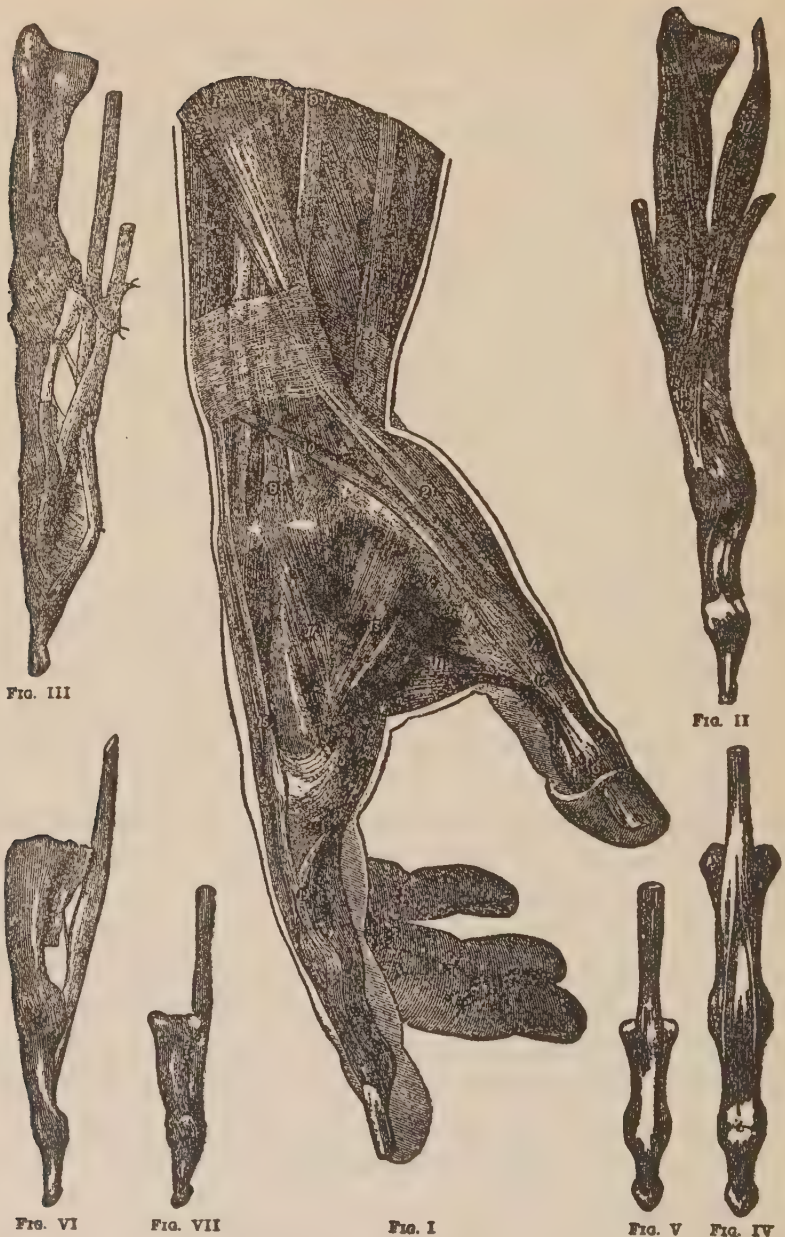


Fig. III

Fig. II

Fig. VI

Fig. VII

Fig. I

Fig. V

Fig. IV

WRIST AND HAND

WRIST AND HAND

FIGS I AND II

ANATOMICAL NAME	USE OF MUSCLE
1. Extensor ossis metacarpi pollicis.	1. Bends the thumb backward and to side.
2. Its tendinous insertion.	2. Similar to above.
3. Extensor primi internodii pollicis.	3, 4. Turn the thumb sideward.
4. Its insertion.	
5. Extensor secundi internodii pollicis.	5, 6. Bend the thumb backward.
6. Its tendinous insertion.	
7. Extensor carpi radialis longior.	7, 8. Bend the index-finger backward.
8. Its insertion.	
9. Tendon of supinator radii longus.	9. Rotates the hand.
10. Tendon of extensor secundi internodii pollicis.	10. Pulls the thumb backward.
11. Adductor pollicis.	11, 12. Bring thumb next to index-finger.
12. Tendinous expansion of above, spreading into the tendon or the long extensor of the thumb.	
13, 14. First dorsal interosseous or abductor indicis.	13, 14. Move index-finger sideward.
15. Extensor indicis.	15. Extends the index-finger.
16. Dorsal interosseous.	16, 17, 18. 19. Move the fingers sideward.
17. Lumbrical muscle.	
18, 19. Their insertions.	

FIG. III. Shows the ends of the muscles going to the fingers and their mode of attachment.

FIG. IV. Top view of bones of a finger.

FIG. V. View of deep tendons going to the fingers.

FIGS. VI AND VII. The same tendons seen on side view.

primitive taste sensations, viz. sweet, sour, bitter and salt. All the nerve fibres of the tongue are probably connected with a continuous column of gray matter in the brain. Most of our so-called tastes should rather be denoted flavours; they are dependent not on the gustatory nerves, but on the sense of smell.

Smell: The organ of smell is situated at the upper part of the nasal cavities. Here the mucous membrane is different from that covering the rest of the nasal passages. In the olfactory part the epithelium is much thicker, and apparently composed of columnar cells resting on several layers of nuclei. The nose is made up of bones, fibro-cartilages, mucous membrane and the ordinary integuments of the body. The internal portions of the nose are the nasal fossae or nasal cavities. It serves as chief avenue of respiration if the mouth is closed. The bones of the nose are the nasal bones and the nasal processes of the superior maxillary bones to which is attached a cartilaginous framework, composed of five movable cartilages of peculiar shape. The nostrils (nasal fossae) are two cavities separate from each other by the septum. On the outer wall of each fossae are the spongy bones, three projecting processes. The space between the superior and middle spongy bones is called superior meatus, and that between the inferior bone and the middle bone is the inferior meatus. The meatuses are lined with a mucous membrane containing the olfactory nerve with a branch of the fifth pair of nerves. In the connective tissue basis (dermis) of the mucous membrane are a number of small serous glands whose office it is to keep the surface of the membrane constantly moist.

Hearing: The organ of hearing is the ear, the most complicated part of the body. The ear is divided anatomically into three parts: The external ear, consisting of the pinna with the external auditory meatus and the internal ear, composed of the osseous and membranous labyrinths with the terminal branches of the auditory nerve. Ear wax is secreted by glands located in the lining of the meatus, and should be detached by the motions of the jaws during talking and eating. If it adheres to the drum membrane it causes partial deafness.

The external auditory meatus in man is about one inch long; its general

function, other than as mere conductor of sound waves is to protect the "membrana tympani" which closes its inner end. The membrani tympani is a thin semi-transparent membrane about three-eighths of an inch in diameter inserted in a grove of the meatus near its end.

The tympanum is a bony cavity bounded externally by the tympanic membrane, and internally by its inner wall. It contains four small bones, the malleus, incus, stapes and orbicularis.

The *tympanic cavity* is connected in front with the pharynx by means of the Eustachian tube. When the Eustachian tube is blocked or diseased the air in the tympanum is gradually absorbed and the person becomes deaf on that side. The internal ear or *labyrinth* consists of three parts: the cochlea, the semicircular canals and the middle portion, the vestibule. The cochlea forms the anterior portion of the labyrinth. It is a spiral tube of bone 20-30 millimeters long divided by the scala media into two parts. The vestibule is situated immediately within the inner wall of the tympanum. The membranous labyrinth is a counterpart regarding form of the bony vestibule, cochlea and the semicircular canals. Within this labyrinth are two small sacs filled with water. The auditory nerve divides the temporal bone into two branches at the bottom of the cavity of the internal ear. The ramifications of these branches terminate on the interior surface of the membrane in minute papilla.

The *pinna,* that part of the external ear which projects from the ear, acts as sound collector. The sound waves which pass down the external meatus impinge on the drum of the ear and set it into vibration. The vibrations are thence transmitted by a chain of three small bones, the auditory ossicles, across the cavity of the tympanum to the fluid which bathes the terminations of the auditory nerve in the internal ear.

The office of the Eustachian tube is to transmit air from the mouth into the tympanum, which equalizes the pressure thus preserving the membrane in proper tension. To sum up we repeat, the vibrations of air are collected by the external ear and conducted through the auditory canal to the drum of the ear: from thence the vibrations pass along the chain of small bones

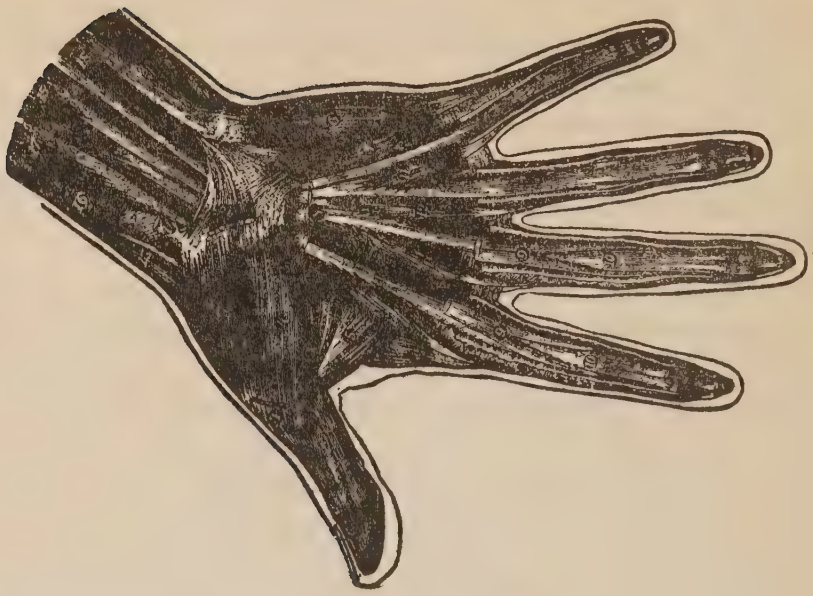


FIG. II

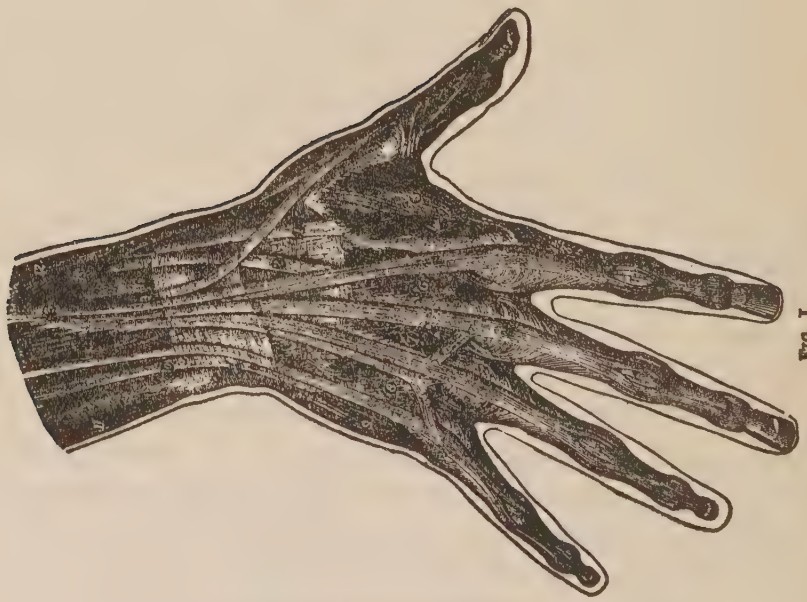


FIG. I

HAND, BACK AND FRONT

HAND, BACK AND FRONT

FIG. I

	ANATOMICAL NAME		USE OF MUSCLE
1.	Insertion of extensor carpi radialis longior.	1, 2.	Extend the middle and index fingers.
2.	Insertion of extensor carpi radialis brevior.		
3.	Extensor indicis.	3.	Extends the index-finger.
4, 5.	First dorsal interosseous.	4, 5.	Move index-finger toward the thumb.
6.	Second dorsal interosseous.	6, 7, 8.	Keep the fingers together.
7.	Third dorsal interosseous.		
8.	Fourth dorsal interosseous.		
9.	Abductor minimi digiti.	9.	Draws the little finger sideward.
10.	Tendon of extensor minimi digiti.	10.	Extends the little finger.
11.	Extensor carpi ulnaris.	11.	Rotates the wrist.
12.	Tendon of extensor ossis metacarpi pollicis.	12, 13.	Move thumb away from fingers.
13.	Tendon of extensor primi internodii pollicis.		

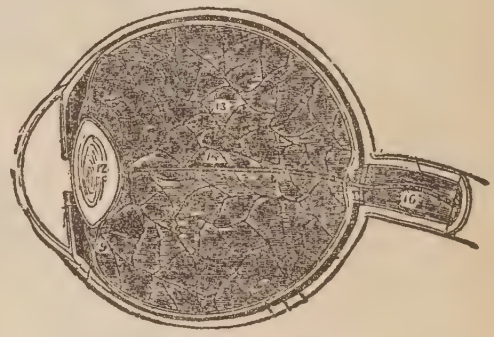
FIG. II

	ANATOMICAL NAME		USE OF MUSCLE
1, 2.	Abductor pollicis, cut.	1, 2.	Draw thumb sideward.
3.	Opponens pollicis.	3, 4.	Move thumb backward.
4.	Flexor brevis pollicis.		
5.	Adductor pollicis.	7.	Draws thumb to index-finger.
6.	Abductor minimi digiti.	6.	Draws little finger to side.
7.	Flexor brevis minimi digiti.	7.	Bends the little finger.
8, 9.	Cut tendons of flexor sublimis digitorum.	8, 9.	Bend the small fingers.
10.	Tendons of flexor profundus digitorum.	10.	Similar to Muscle 8 and 9.
11, 12.	Lumbricales.	11, 12.	Move fingers sideward.
13.	Tendon of extensor ossis metacarpi pollicis.	13.	Extends the thumb.
14.	Tendon of flexor carpi radialis.	14.	Bends the wrist.
15.	Tendon of flexor digitorum sublimis.	15.	Bends the small fingers.
16.	Pronator quadratus.	16.	Rotates the forearm.
17.	Tendon of flexor longus pollicis.	17.	Bends the thumb.
18.	Flexor digitorum profundus.	18.	Bends the small fingers.

to the internal ear and from there the impression is transmitted to the brain by the auditory nerve.

Sight: The eye, the organ of the vision, is composed of the eyeball, the optic nerve, the muscles of the eye and the protecting organs. There are six muscles attached to the eye: The superior rectus muscle pulls and directs the eye upward, the inferior rectus downward, the external and internal rectus muscles pull the eye to the right and left and the oblique muscles move the eye slantwise in any direction.

THE EYE



SIDE VIEW OF THE EYEBALL

The *eyeball* is contained within a bony cavity called the orbit of the eye; it is spherical in shape and has three sets of coats: The sclerotic and cornea, the choroid, iris and ciliary processes and the retina. The contents of eyeball, called humors, are likewise three in number: the aqueous, or watery, the crystalline (lens) and the vitreous, or glassy. The sclerotic coat is a white fibrous membrane covering about four-fifths of the external surface of the eyeball. It is known as the white of the eye. Internal to the sclerotic is the choroid coat, a membrane with a double pigmented internal layer and supplied with blood vessels which furnish the vascular supply to the whole eye. In front of the ciliary processes the choroid leaves the sclerotic and hangs as a curtain into the cavity of aqueous humor, between the cornea and the lens. The curtain which is known as the *iris* presents a circular orifice at its centre, the pupil, and is provided with muscular fibres by means of which the pupil may be constricted or dilated. The posterior surface of the iris is lined by a pigmented epithelium.

The *retina* is a delicate nervous membrane formed by the expansion of the optic nerve after its passage through the sclerotic and choroid coats upon which the images of the external objects are received.

It is the so-called inner coat of the eye and is placed between the choroid and hyoloid membrane extending as far as the ciliary ligament, where it terminates in a fine serrated border.

The retina is thickest at the entrance of the optic nerve; its internal surface is smooth At the point of entrance of the optic nerve there is a round disc, the porus opticus, in the center of which may be seen the central artery of the retina entering and branching above and below, and the central veins converging and passing inward.

There is also a little prominence of nerve-substance at this point, the optic papillae.

The retina appears to the naked eye as a simple, soft, transparent membrane, but under the microscope it is found to be an exceedingly complex structure showing the most complicated organization.

It is composed of eight layers, all differing from one another. The first is a layer of epithelial nucleated cells containing pigment whose function seems to be the absorption of the rays of light.

The second layer is chiefly composed of germ-like bodies, known as rods and cones. Little is known of their function beyond the fact that among those animals and birds which seek their food by night the retina consists solely of rods, while in those birds which live on brightly-colored insects the cones are about as numerous as the rods.

This difference seems to indicate that the rods are concerned in the discrimination of the quantity of light, the cones in that of its quality or color.

The next successive four layers are composed of nucleated corpuscles. The seventh layer, called the ganglionic layer, is a stratum of nerve cells connected by oblique processes with the eighth layer which consists of the ultimate fibres of the optic nerve.

The *iris* (rainbow)—so called from its various colors in different individuals—is the continuation of the ciliary muscles; it is a circular contrac-

FIG. I FIG. II

THIGH, OUTSIDE AND INSIDE VIEWS

THIGH, OUTSIDE AND INSIDE VIEWS

Fig. I

BONES

ANATOMICAL NAME	ORDINARY NAME
A. Great trochanter.	A. Head of the long bone of the thigh.

MUSCLES

ANATOMICAL NAME	USE OF MUSCLES
1. Obliquus abdominis externus.	1. Muscle of the abdominal wall.
2. Gluteus maximus.	2. Pulls the thigh backward.
3, 4. Its insertion into femur.	3, 4. Similar to Muscle 2.
5. Its insertion into trochanter.	5. Similar to Muscles 2, 3, and 4.
6. Gluteus medius.	6. Rotates the thigh inward.
7. Fascia which covers the buttock.	7. Fascia over the buttock.
8. Tensor vaginæ femoris.	8, 9, 10. Rotate the thigh inward.
9. Its origin.	
10. Its insertion into fascia lata.	
11. Sartorius.	11. Rotates the leg outward.
12. Vastus externus.	12. Extends leg sideward.
13. Rectus femoris.	13. Bends the knee.
14. Vastus internus.	14. Brings leg inward.
15. Tendon of quadriceps.	15, 16. Rotate the knee.
16. Cut end of fascia lata.	
17. Biceps.	17. Raises the knee.
18. Short head of biceps.	18, 19. Rotate the knee.
19. Its tendon.	
20. Semimembranosus.	20. Bends the knee.
21. Soleus.	21. Raises the heel.
22. Tibialis anticus.	22. Raises the foot.

Fig. II

ANATOMICAL NAME	USE OF MUSCLES
1. Iliacus.	1, 2. Raise the thigh.
2. Psoas.	
3. Rectus femoris.	3. Raises the knee.
4. Sartorius.	4, 5. Rotate the knee outward.
5. Insertion of sartorius.	
6. Vastus internus.	6, 7. Rotate the knee inward.
7. Its attachment into patella.	
8. Adductor longus.	8. Pulls the leg inward.
9. Gracilis.	9. Raises the knee.
10. Adductor magnus.	10. Draws the thigh inward.
11. Semimembranosus.	11, 12. Bend the knee.
12. Semitendinosus.	
13. Outer head of gastrocnemius.	13. Raises the heel.
14. Gluteus maximus.	14. Rotates leg outward.
15. Obturator internus.	15, 16. Support the pelvis.
16. Its tendon leaving pelvis.	
17. Pyriformis.	17. Holds thigh in position.

ticle membrane with a round hole to the inner side of its center, pupil, and hangs like a curtain in the aqueous humor behind the cornea and in front of the ciliary processes and the lens.

The iris divides the space occupied by the aqueous humor into the anterior and posterior chambers which communicate through the pupil.

The coloring matter of the iris is due to minute pigment cells on its surfaces.

The *crystalline lens,* made up of radiating lens fibres, each of which is produced by the modification of an epithelial cell is biconvex, the posterior surface being more convex than the anterior. It is surrounded by a tough membrane, the capsule of the lens, and rests in a cavity hollowed out of the anterior surface of the vitreous humor. The lens consists of a soft substance, arranged in layers. The ciliary processes by their action upon the lens effect a change of the degree of convexity and through this change we are enabled to see the objects in the distance as well as near the eye. Without this change in the convexity of the lens our vision would be confined to certain distances In the normal the rays of light from an object pass through the lens, adjusted for the proper distance and focus on the retina.

In the nearsighted eye these rays focus at a point in front of the retina, while in the farsighted eye they focus behind the retina. The change of the convexity of lens is called "accommodation."

The vitreous humor fills about four-fifths of the entire eyeball. It is transparent and consists of a soft jelly-like substance.

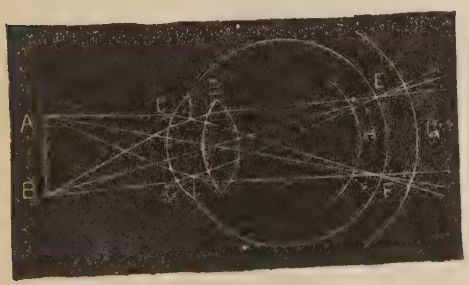
The eyeball is protected in front by the eyelids, eyebrows and lachrymal gland. The eyelids are internally lined with a delicate mucous membrane continuous with the conjunctiva covering the anterior surface of the eyeball. This membrane is kept constantly moist by the secretion of the lachrymal gland, situated at the upper and outer angle of the orbit. The orbits are the bony sockets in which the eyeballs rest. The *tears* are the excessive secretion of the lachrymal glands.

Since the tears are constantly flowing over the eyes they serve not only to moisten the surface, but to wash away any irritant material or bac-

teria which may be deposited from the air. Our knowledge as to the nervous mechanism of the secretion of the tears is still incomplete. Stimulation of the conjunctiva, the membrane lining the lids, evokes an increasing secretion of lachrymal fluid which can also be induced by emotional conditions. The excess of the fluid is drawn off from the conjunctival sac by the nasal duct which leads to the nasal cavity on the same side.

Just below the mucous membrane of the lids we find a series of sebaceous glands, the "Meibomian Glands." The fatty secretion of these glands is poured out at the edge of the lids, keeping these wet and the eyelids greasy and so preventing their being wetted by the tears. Under normal conditions the whole of the fluid is kept within the sac and flows away only through the nasal ducts.

Physiology of Vision: As we have already mentioned, the organ of vision consists of two parts, the sensory surface or retina, composed of several areas, each of which can be separately stimulated by light, and the dioptric mechanism for projecting a real image of external objects. The science of optic treats not only of vision but also of the properties and the phenomena of light. The word light as employed by physicists, implies a particular kind of energy, which arriving at the retina in a certain way excites in us a sensation of light. A ray is a single line of light. A beam of light is a body of parallel rays. Luminous bodies emit rays in every direction, so that the space through which they are visible is filled with them. The light-rays move forward in straight lines from the luminous body and are only turned out of their course by some obstacle. However, when a ray of light passes obliquely from one transparent body into another it swerves from its linear direction and is bent, or refracted, more or less, out of its original course. The refracting power of the aqueous humor and the crystalline lens of the eye are the medium of concentrating or



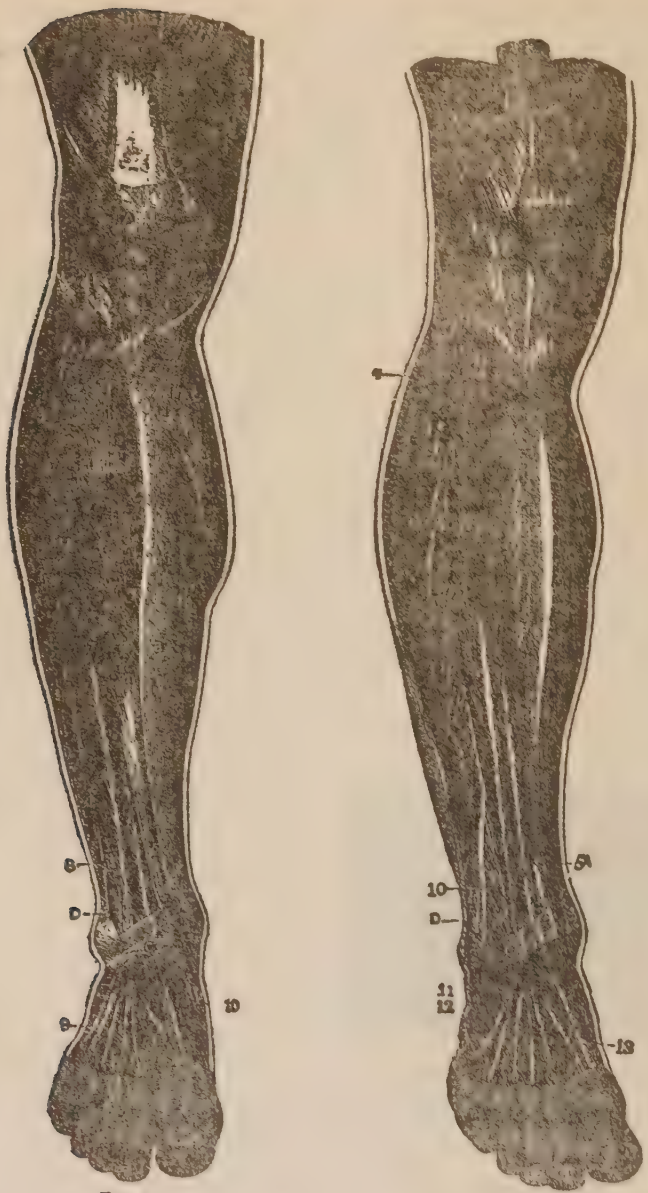


FIG. I FIG. II

LEG AND FOOT

LEG AND FOOT

FIG. I

BONES

ANATOMICAL NAME	ORDINARY NAME
A. Patella.	A. Knee-cap.
B. Tibia.	B. Bone of the leg.
C. Annular ligament.	C. Ligament of the ankle.
D. External malleolus.	D. Outer bone of ankle.

MUSCLES

ANATOMICAL NAME	USE OF MUSCLE
1. Vastus externus.	1, 2. Raise the knee up.
2. Vastus internus.	
3. Tibialis anticus.	3. Rotates foot outward.
4. Extensor longus digitorum pedis.	4. Extends the toes.
5. Peroneus longus.	5. Turns foot in.
6. Soleus.	6. Raises the heel.
7. Extensor proprius pollicis.	7. Extends the big toe.
8. Peroneus tertius.	8, 9. Raise outside of the foot.
9. Its tendon.	
10. Tendon of tibialis anticus.	10. Raises inner side of foot.

FIG. II

BONES

Same as FIG. I

MUSCLES

ANATOMICAL NAME	USE OF MUSCLE
1. Cut portion of vastus externus.	1, 2. Raise the knee-cap.
2. Vastus internus.	
3. Biceps femoris.	3. Pulls the knee out.
4. Cut head of peroneus longus.	4. Turns foot inward.
5. Cut portion of tibialis anticus.	5, 5*a*. Raise foot.
5*a*. Tendon of same.	
6. Extensor longus digitorum.	6. Extends the toes.
7. Extensor proprius pollicis.	7. Extends the big toe.
8. Soleus.	8. Raises the heel.
9. Peroneus brevis.	9, 10. Raise outside of foot.
10. Peroneus tertius.	
11. Extensor brevis digitorum.	11. Raises the toes.
12. Tendon of peroneus tertius.	12. Raises outside of foot.
13. Tendon of extensor proprius pollicis pedis.	13. Raises the large toe.

converging the pencils of rays so as to form a picture of the object on the retina. We now refer the reader to the accompanying diagram to comprehend the phenomena of vision. Rays of light reflected from the points A and B are slightly refracted inward upon entering the anterior chamber at C C, which contains the aqueous humor. Upon entering the crystalline lens D they are still further bent until finally these lines, converging at one point, form the focus E F. The highest point becomes lowest and vice versa. In other words, the object is inverted and what we call the upper end of the vertical object is the lower end of its picture on the retina. In the normal eye the rays focus directly on the retina, however, should the posterior wall of the retina be too close to the lens the lines would not meet with the result that the vision would be blurred and confused, as on the line H. Should the retina be at the line G the rays having come to a focus at E F will again diverge and will thus result in an imperfect picture. Most optical defects of the eyes, as near-sightedness or Myopia or far sightedness hypermetropia to which we have referred already, can be corrected by suitable spectacles. In the case of the myopic eye we need lenses which will convert the parallel rays into divergent rays; such cases are treated, therefore, with concave lenses. Conversely, hypermetropia is treated with convex lenses, which will aid the too feeble refractive power of the eye, and so bring parallel rays to a focus on the retina without any effort of accommodation. In order to determine the refractive power of the eye it is usual to employ Sneller's test type. This consists of a series of letters which are placed at a certain distance from the eye. Through the use of lenses it is easy to ascertain the optical defects of the eye.

Although we have not been able to give in this chapter a very complete description of the organs and their functions, we, nevertheless, have aimed to make it possible for our readers to get an idea of the wonderful organization of the organ of vision of the human body.

CHAPTER XXXVIII

THE REPRODUCTIVE AND URINARY SYSTEM OF THE HUMAN BODY

THE URINARY ORGANS

ONE of the chief excretions of the body is the urine. The organs charged with this function are the kidneys, the ureters, the bladder, and the urethra.

The kidneys are a pair of bean-shaped glandular organs on each side of the back bone, opposite the small of the back, below where the ribs stop. They average each nearly five inches in length, two inches in breadth and one inch in thickness. The left kidney is usually somewhat heavier than the right, and the kidneys in men are heavier than in women. The left kidney is placed somewhat higher than the right.

THE URINARY ORGANS

As already indicated, the kidneys are glands, but in addition to excreting certain substances, they also act as filters for the blood. The fine anatomy of the kidneys is most interesting and for those persons who wish to get some idea of the mechanism we will give as briefly as possible in the simplest language we can use a description of the construction of the kidneys. Of course, there are many of the minute details which must be omitted, because to understand thoroughly the mechanism and function, this organ would require

more study than could reasonably be expected of one who is not a physician or anatomist.

The blood enters the kidneys at the concave edge and is distributed to all parts of the organ. An artery which carries the blood divides up into finer and finer branches until the end branches are very small and on the end of each there is a round body which looks under the miscroscope like a berry made up of coils at the end of the artery. The blood flows through these coils and it is here that it gives off urea and is then carried off by minute veins. Surrounding each one of these little berry-like bodies, there is a capsule which lies quite closely to these bodies and each one of these capsules has a tube leading off from it which carries the urine. These urine tubules, one from each of these little berry-like organs, run parallel to one another and finally unite in a larger tube which opens into what is called the pelvis of the kidneys. The pelvis of the kidneys is a space at the concave edge and is shaped like a funnel. The stem of the funnel has a long tube which runs down into the bladder and opens into it.

The ureters, the excretory ducts of the kidneys, are from sixteen to eighteen inches in length and not thicker than a goose-quill. The bladder is a tube situated in the lowest part of the abdomen in front of the rectum in the male and in front of the uterus or womb in the female. It measures about five inches in length and three inches across, when moderately distended and holds ordinarily about one pint of urine. It is composed of a layer of muscles and is lined with mucous membrane and covered with serous membrane. The external opening of the bladder is in front at the lowest part and allows the urine to flow out through the tube called the *urethra.* In women the urethra is about one and one-half to two inches long; in men it runs the whole length of the penis. The latter varies in length from eight to nine inches and is divided into three distinct parts: the *prostatic, membranous and spongy.* The opening at the front of the bladder which is called the neck is closed up by a drawstring muscle which surrounds it, and this muscle prevents the urine from flowing out, except at regular intervals, when the bladder is being emptied. The moment the bladder is emptied this muscle again contracts and closes the bladder. The

emptying of the bladder is brought about by the muscles of which the wall is composed. So that in emptying the bladder we loosen the ring muscle around the neck and we contract the muscles of the wall. If the ring muscle at the neck becomes paralyzed the urine dribbles away constantly from the bladder. If the muscles of the wall of the bladder become weak or paralyzed the urine accumulates in the bladder and distends it to such an extent that it may even rupture.

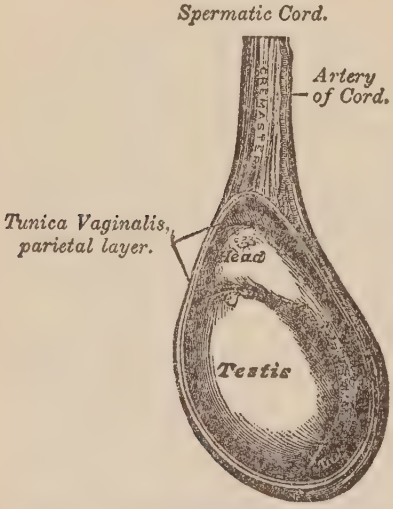
The quantity and composition of the urine, according to Prof. Huxley, the English scientist, vary greatly according to the time of the day, the temperature and moisture of the air, the fasting or full condition of the alimentary canal and the nature of the food. An average healthy man excretes through the kidneys about fifty ounces, or 24,000 grains of water a day. In this are dissolved 500 grains of urea, but not more than ten to twelve grains of uric acid. Once in a while the urine contains more uric acid and lime salts than it should, or the urine may be concentrated, as we say, and in that case these substances may form into gravel or stone in the bladder which cannot pass through the urethra. This is the cause of what is commonly known as stone in the bladder which has to be removed. If the gravel is small it may be removed with forceps specially constructed for that purpose. If it is larger the bladder has to be opened either through the abdomen, or through the space between the anus and the testicles in men, and between the anus and the vagina in women. The formation of gravel and stone in the bladder is much more common in men than in women.

THE MALE REPRODUCTIVE ORGANS

The male generative organs, also called sex organs, are divided into external and internal.

The external organs, which are outside the body, are the Penis and the Testicles. The internal ones are the Prostate and the Seminal Vesicles. The penis, also called phallus, is a hollow, spongy organ through which runs the passage from the bladder called the urethra by which the urine escapes, and which serves also for the expulsion of the semen (impregnat-

ing fluid). It may be divided into three parts: root, body and glans. The root is the part attached to the body; the rounded somewhat triangular portion in which it ends is called the glans, the part of the penis between the root and the glans is called the body of the penis, which consists of three distinct parts, two on top called the cavernous bodies or corpora cavernosa; and one on the bottom, called the spongy part or corpus spongiosum. The whole organ is surrounded with skin (excepting the end), the inner fold of which is attached to the end of the corpus cavernosum, while the outer fold is extended beyond, so that it may partly or wholly cover the glans and can be pulled backward. This loose skin is called the foreskin or prepuce, and is the part cut off in circumcision. Under ordinary circumstances the penis is soft and flaccid, but under sexual stress it is apt to become stiff and erect. This condition is called erection.



TESTIS AND EPIDIDYMIS IN PLACE, AND TUNICA VAGINALIS LAID OPEN

The *prostate gland,* which can be felt by putting the finger in the rectum, is a small body, in shape and size resembling a large chestnut. It is perforated at about its center to permit the passage of the urethra and the ejaculatory ducts. It is surrounded by a capsule and secretes a milky fluid which seems to be necessary to the life and virility of the spermatozoids. Any disorder of the prostate leads to a great deal of trouble. Near the prostate are situated the Cowper glands, two small bodies about the size of peas. They have an excretory duct, about an inch long, through which they empty their secretion, a fluid similar to that of the prostate. Contrary to former opinion the Cowper glands are now not considered of much importance in the scheme of the generative organs from a physiological viewpoint.

Of the greatest importance, however, are the testicles (testes) inasmuch as they are the organs that manufacture the spermatozoa without

which the human race could not be perpetuated. The testes are two glandular organs of oval form and their average size is one and one-half to two inches long, one inch broad and one and one-quarter inches thick. The testicles are not lying loose in the scrotum, the sac containing them, but each is suspended from a cord called the spermati cord. The testes are not solid bodies, but composed mostly of seminal tubes, arteries, nerves and lymphatic vessels held together by cellular tissue. The testes consist of a number of divisions, each one equipped with a duct to carry out the semen; the seminal tubes are at first exceedingly small and numerous but gradually converging they form larger branches, until eventually they form but one tube, the *epididymis,* from which the semen passes into the vas deferens, by which the semen is conveyed to the urethra. The epididymis lies on the upper and back portion of the testicles; it consists of three portions: a head, body and tail; the upper portion of the epididymis is enlarged forming a head called the globus major, then it goes straight down forming the body of the epididymid; at the bottom it again enlarges, forming a smaller enlargement called the globus minor which bends upward uniting with the vas deferens which is the excretory duct of the testicles and carries the semen into the Seminal Vesicles and Urethra.

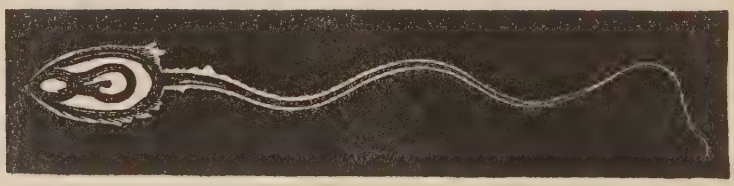
The testicles are covered with a coat which surrounds each one in addition to the scrotum or outer covering which encloses them both. One of the testicles, the left one, hangs lower than right, which is perfectly normal as it prevents injury by sudden compression of the limbs. We now consider for a while the vesiculae; they are two in number being on each side of the body. They lie between the base of the bladder and rectum and act as reservoirs for the semen to which they add a secretion of their own. They are pyramidal in shape, coiled upon themselves like a spiral and measure about two and one-half inches in length. From each seminal vesicle there is an excretory duct which uniting with the vas deferens of its side forms the ejaculatory duct, which during sexual intercourse ejaculates or throws out the semen into the urethral canal. The seminal vesicles measure about two and one-half inches in length, are lying above and on each side of the prostate.

MICROSCOPIC APPEARANCE OF HEALTHY HUMAN SEMEN MAGNIFIED FIVE HUNDRED DIAMETERS.

The semen is a thick whitish fluid of a peculiar order not possessed by any other substance, consisting of several secretions, which, as some believe, furnish nourishment to the spermatozoa.

The spermatozoa are the essential contribution of the male to the creation of another human being, the accompanying fluid is said to have no direct relation to this. Under the microscope they appear as minute floating and wriggling bodies with all appearance of independent little animals. Each of these consists of three parts, a head, a body and a tail. They are possessed of the power of keeping in motion for a number of hours after being expelled from the male organ into the vagina. It has been estimated that as many as thirty-two million of these little bodies are ejected from the male organ at the time of sexual union. Whether these bodies are little animals or just cells endowed with motion is a question that has not been answered as yet.

When the spermatozoon pierces an ovum and fertilizes it and it develops into a child it has transmitted to it all the characteristics of its progenitor. They are the true fecundating agents of the sperm and of whatever nature the other secretions may be they are but secondary in importance, as we have already stated. Spermatozoa are readily affected and destroyed by acids, and the secretions from the Cowpers glands and the glands of the urethra neutralizes the acidity of any moisture that may be in the urethra



A SPERMATOZOON

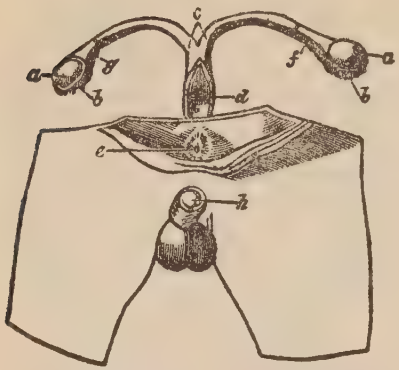
and which would act unfavorably upon the vitality of the spermatozoa. Under sexual stress the penis expands and its position is changed from its uncongested state to an erect one. In sexual union the urethra also expands to permit free passage to the spermatozoa in the seminal flow. The increase in size requires some force to effect an entrance into the vagina. Motion engenders friction and heat, from the glans the excitement is transmitted to the testes and the act culminates in the expulsion of the semen. The organ then subsides to its normal size and condition.

PSEUDO-HERMAPHRODITISM

(Informal, Morphrodite)

A Hermaphrodite is an individual with functioning active glands of both sexes provided with excretory ducts, but the medical science has no fully developed case of hermaphroditism on record. However, cases of Pseudo-Hermaphroditism are not infrequently met with. These persons of one sex show some of the characteristics of the other sex and some times it may take years before the true sexual nature may be discovered. In a recently discovered case of bi-sexuality in England the person himself was unable for almost twenty years to determine his real sex. Many cases are on record showing that individuals dressed and lived as man or woman for many years, before they ascertained to what sex they by nature really belonged. In this respect the case of Carl Hohman is one of the most remarkable ones in medical history. For 46 years he was considered and lived as a female, and when his true sex was determined he assumed male attire and married as a man.

Many of the Pseudo-Hermaphrodites are males with testicles hidden in the abdomen or scrotum, while their external genitals are decidedly female in character, as shown in illustrations in this chapter. The pocket or opening under the penis is mistaken for a vagina.



A COMPLETE CASE OF HERMAPHRODITIC MALFORMATION IN THE HUMAN SUBJECT.

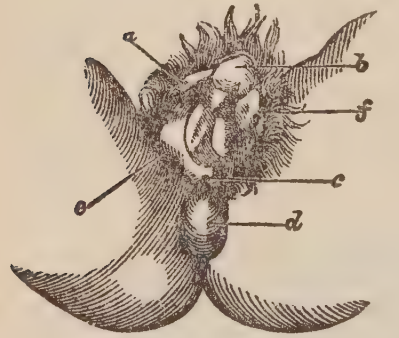
(*After Mayer, from Cyclop. Anat. et Phys.*)

a, a, Testicles with their epididymis; *b, b*, and a two-horned uterus *c*, which terminates in the vagina *d*, and which opens into the posterior part of urinary bladder *e*. From the left testiclea contorted vas deferens, *f*, arises and extends down to the vagina; the right vas deferens, *g*, is shorter and terminates in the right of the uterus. The glans penis, *h*, is imperforate.

The most recent case is that of Beatrice Hoe, who became Arthur Hoe after having lived as a girl for over twenty years. Beatrice, born 1902, in a small town in England, was, to all accounts, an unusually handsome girl with dark expressive eyes and an abundance of magnificent hair. It was not until she had almost reached her twenties that she realized that she was no longer a girl. Though the transformation in Beatrice was gradual, her voice eventually deepened and lost all trace of feminine timbre and the growth of a beard and moustache became evident to such an extent that rendered shaving imperative.

Beatrice became Arthur, adopted masculine attire and set out to earn a living as a man.

BI-SEXUAL AND EMBRYONIC FORMS



EXTERNAL APPEARANCE OF THE ORGANS OF GENERATION OF A FEMALE.

a, clitoris; *b*, glands of clitoris; *c*, orifice for passage of urine; *d*, tumor in perineum; *e*, small tumor in right groin; *f*,

In a simple way it may be said that embryonic forms are bi-sexual, they may develop either as males or females. In some instances there arises a struggle between two glandular influences, the one feminine, the other masculine, extending sometimes over many years and ending as in the case of Beatrice Hoe in a complete sex reversal.

Another famous case of bi-sexuality was that of Marie Rosine in the middle of the last century. Marie was born in

Niederleuba, Germany. While employed as a domestic it happened that she broke her leg and a doctor was called in to attend her. Always she had believed herself a woman. Her true sex was totally unsuspected by her until she reached the age of thirty, and then it might have remained undiscovered until the day of her death had not the accident made an operation necessary. After the operation certain physiological changes took place which made it clear that Marie Rosine was a man. Whereupon she assumed the name of Gottlieb Gottlich and earned his living by traveling from one clinic and medical school to another allowing the doctors and students to study him.

Before this change of sex Gottlieb as Marie Rosine had had several sweethearts who considered her an extremely attractive girl. After he became Gottlieb he met a young woman who fell in love with him and regarded him as an ideal man and lover.

CHAPTER XXXIX

DISEASES PECULIAR TO MEN

IT IS the duty of every man to seek information concerning diseases that are peculiar to their sex. With such knowledge he is able to detect the symptoms of disorders before they have reached a dangerous stage and thus being in a position to seek medical advice ere the chances for recovery have vanished forever. Many a disease could have been avoided, if the unfortunate individual had been informed of the first principles of prophylaxis.

Besides the diseases and malformations of the genitals dealt with in this chapter there are others that probably should be included in a treatise of this character, but owing to their complicated character and the fact that they are of very rare occurrence and require the attention of a competent surgeon, we have omitted them here.

SEMINAL EMISSIONS

By spermatorrhoea, or night emission, we understand the emission of semen during sleep. Some writers on Sexual Diseases claim that these emissions are very disastrous in their effect upon the mind, thus greatly exaggerating the evil results of pollutions. On the other hand, some doctors are trying unduly to minimize the dangers of seminal emissions; but the truth of the matter depends a good deal, according to modern view, on the nature of this disturbance. Occasional involuntary discharges, occurring once in two or three weeks, or even once a week in individuals otherwise physically sound and mentally normal may be disregarded. They are normal discharges suggestive of high virility. The seminal vesicles become distended with semen and it must find a way out. There are young men who imagine themselves the victim of all sorts of maladies whenever an

emission takes place. This fact is taken advantage of by quacks and swindlers, who, by swamping the papers with their scare advertisements, fill their pocketbooks with the money of these easily misled persons. But if the pollutions occur more than once a week then they are abnormal and it is necessary to consult a competent physician. Excessive emissions weaken the general system and are apt to cause nervous disorders. Seminal emissions must not be confounded with spermatorrhoea, for the latter is a condition in which the patient constantly or almost constantly, at the slightest exertion or excitement loses a few drops of semen. Fortunately this disease is very rare.

If pollutions are neglected serious consequences may result therefrom.

This condition does not only effect the body but it may also produce mental symptoms, such as lack of concentration and absence of ambition to mention only a few of the dire effects.

The chief cause of spermatorrhoea is masturbation, or self-abuse; according to some authorities the occasional indulgence in masturbation is not injurious but it is a very bad practice, as it is apt to lead to the habit of self-abuse, which by stimulating the organs into a state of constant activity, leaves them in a weak and exhausted condition. In an advanced stage there is no erection of the organ before a discharge, but the fluid escapes without sensation at every evacuation of the bowels or passage of water. It is held by many physicians that excessive sexual intercourse will produce spermatorrhoea, while others claim that continence, the opposite condition, may be conducive to the affection. Many disorders of the genital organs lead to spermatorrhoea, likewise disorders of the adjoining parts. Piles and habitual constipation of the bowels may produce it as do also some medicines as opium and cantharides and abuse of tobacco and alcohol.

Symptoms: A patient suffering from this malady may complain of headaches of pains in the back of the head, of weakness in the muscles of the neck and the spine, rush of blood to the head, dizziness and impaired vision. He may also complain of nervous trouble or spots floating before his eyes and in some cases he may get black rings around the eyes. Fre-

quently there is much irritation of the urethra continuing up into the bladder; there is also present a constant desire to urinate, though the urine passes off in small quantity. As the disease progresses the patient may develop certain phobias as aversion to the opposite sex. The excessive drain of vital fluid cannot but eventually affect the brain.

Treatment: The treatment is both medical and hygienic. The first must be left to the physician. Much, of course, depends on the patient himself; he must be determined to rid himself of all bad habits, forego all highly seasoned food, avoid constipation and everything else of exciting nature; coffee and tea are also best cut out. The mattress on which the patient sleeps should be rather hard, the covering should be light, but the feet must be warm. We give the following prescription for nocturnal emissions: Bromide of potassium, one ounce; tincture of iron, one ounce; water, three ounces; dose, one to two teaspoonfuls after each meal and at bedtime; it should be taken in a little water. Another valuable prescription is as follows: Tincture of chloride, of iron and fluid extract of ergot, each three ounces; dose, a teaspoonful in water after each meal. Personal cleanliness is very important in the treatment of the disease. A bath should be taken every day and the genitals should be bathed in cold water both night and morning.

INFLAMMATION OF THE TESTES

The testes are very sensitive organs. An inflammation of the testicles may be caused by a blow or a fall. A frequent cause is gonorrhoea, especially in cases of a sudden stoppage of that disease; strong injections employed in the treatment of gonorrhoea may also bring it on. Inflammation of the testes in children is caused by the mumps that passes into the testicles and causes orchitis, though such instances are very rare.

Symptoms: The first symptoms are soreness and swelling of the affected parts. An angry red appears all over the scrotum, which becomes hot and swollen and so sensitive that the slightest touch may cause excruciating pain. This pain assumes sometimes an intensity that effects the loins and limbs, making it impossible for the patient to move about. This condi-

tion may cause an atrophy of the testes that is usually accompanied by the loss of libido and by impotence. However, such dire consequences rarely occur and in the majority of cases under competent treatment the inflammation quickly subsides, without leaving evil effects behind. There are many men unable to have children, because in childhood they fell or received a severe blow on the testicles.

Treatment: This malady requires a poultice-treatment and light laxatives should be taken, if the patient is constipated. The most effective way to bring about a rapid cure is absolute rest. The patient should lie down on his back and have the member supported with a bandage. An old New York doctor recommends a poultice which is prepared by mixing very fine-cut tobacco, one ounce in about ten ounces of water, bringing the whole to a boil while stirring it briskly and then adding ground flaxseed until the desired consistence is obtained. The poultice is placed on a piece of fine muslin and this is placed on the inflamed member as hot as the patient is able to bear and then all is covered with a piece of oil-silk and held in place by a bandage. The poultice is to be renewed every eight hours until the pain ceases. For the treatment of chronic orchitis a blue pill is often effective, four or five grain combined with one grain of opium should be taken at bedtime 'till a slight soreness of the gums is noticed.

VARICOCELE

In the practice of the quacks the treatment of Varicocele plays a very important part. Varicose veins are enlarged veins which are more commonly present on the legs, but are also seen in other parts of the body.

The same thing may happen with the veins in the scrotum above the testicle of the male, on the left side, in most cases. This condition is called Varicocele. Very many people have this disturbance in some slight degree, especially men who have to do heavy work. If these affections cause no discomfort they may be entirely ignored and are not of the slightest consequence. Even when they produce trouble it is chiefly imaginary, in most instances. However, if the varicocele is of a severe degree it feels like a big bunch of earthworms and causes pain in the hollow of the back, or a

dragging pain in the groin. It may even interfere with the performance of the sexual function. Varicocele occurs usually in young men and often disappears of itself later in life. Undue sexual excitement may produce this condition.

Treatment: When any treatment is required a suspensory bandage should be applied and bathing the testicles night and morning in cold water, with avoidance of constipation will be usually sufficient to relieve any discomfort arising from this disorder. An absolute cure can only be effected by a surgical removal of the veins.

PRURIGO OF THE SCROTUM

While Prurigo is not a disease it may cause its victims great discomfort. The scrotum may sometimes show a number of small red pimples, which, while negligible, may produce an inflamed condition owing to the scratching and rubbing the patient is forced to resort to. The skin may become hard and discharge a disagreeable secretion.

Treatment: The bowels should be kept open and the use of condiments should be avoided. The following application may prove efficacious in many cases: Equal parts of citrine ointment and lard, well mixed and rubbed on the parts at night; through the day may be used a cooling lotion consisting of vinegar and water. To relieve itching of the skin from any cause the following formula may be found very effective: Carbolic acid, one drachm; glycerine and rose water, each two ounces. If insect-parasites cause the itching the carbolic acid will be found of special value. The scrotum should be washed twice every day and care should be taken to prevent any irritation of the skin by the clothing. What causes Prurigo is not definitely known, but we doubt that many persons of clean habits are ever troubled with it. In persistent cases electricity treatment is said to act like magic.

HYDROCELE

This is a swelling which consists of an effusion of the watery or serous part of the blood into the sac which surrounds the testicle and the spermatic cord. When neglected this affection may cause an enormous swell-

ing. The best treatment in this case is the removing of the fluid, but if the effusion recurs an operation becomes necessary.

ELEPHANTIASIS OF THE SCROTUM

Though this disease is not uncommon in some parts of the globe it rarely occurs in the United States. The enlargement may be confined to the scrotum, or extend over all the external organs. The swelling is caused by an effusion of a jelly-like fluid into the scrotum. Large brown scales appear usually on the skin covering the growth. This disease is frequently found in the West India Islands, Africa, Greece, Egypt and the East Indies. The affection does not interfere with the other functions of the body and is purely local. The scrotum sometimes attains an enormous size, though, even in the worst cases, the patient may enjoy a good general health. It is said that some of these tumors have reached the weight of more than two hundred pounds.

The only treatment of this disease is an operation which, though very dangerous for the patient, is sometimes successfully performed.

PHIMOSIS

A narrowing and contracting of the prepuce, or foreskin, so that it cannot be pulled back and the glans cannot be uncovered is called Phimosis. It is a disease not very uncommon in boys and its victims should be circumcised without fail. However, whenever the covering skin can be pulled back so far that the glans may be seen, no treatment is required, for when puberty is reached the orifice enlarges sufficiently for all purposes. If the prepuce interferes with passing of the urine then a condition may arise leading to inflammation, and ulceration of the glans penis. Phimosis may also be caused by gonorrhoea and chancroid.

PARAPHIMOSIS

Paraphimosis is a term applied to a condition in which the prepuce gets behind the corona of the glans and cannot be pulled forward over the glans surrounding the penis like a tight cord. This condition usually happens

with young boys, who in pulling back the prepuce for the first time, find it impossible to pull it forward over the glans. The application of cold lotions will be sufficient to reduce the swelling and inflammation. Phimosis and Paraphimosis may be caused by inflammation accompanying other affections. In such instances the removal of the cause will bring the desired relief, but generally an operation is necessary. The operation is quite simple and consists in introducing an instrument carefully under the skin, and then with a knife it is cut or slit up sufficiently to make a proper opening. In any case it is always the best to consult a competent doctor or surgeon to avoid serious complications.

BALANITIS

Balanitis is an inflammation of the glans penis. It is derived from the Greek word balanos which means acorn and refers to the shape of the glans. The predisposing causes are a long and tight prepuce and a natural irritable condition of the skin. It may occur through contact of the parts with irritating discharges such as leucorrhoea, menstruation and gonorrhoea, but generally it is the result of lack of cleanliness.

Symptoms: The membrane becomes at first moist and red, then the whole surface of the prepuce may become inflamed, accompanied by soreness and itching sensation at the end of the organ. As Balanitis as well as phimosis and Paraphimosis having once occurred may easily recur many physicians recommend cirumcision as the most effective preventive means.

Herpes is another affection of the genitals. It consists of an eruption of several small vesicles or blisters which either burst leaving a raw surface, or dry up and disappear within a short time. Herpes, like Balanitis, is often due to uncleanliness, or to some nervous disorder. Herpes is a mild affection and we mention it here because it may cause a condition that renders the patient more liable to infection with chancroid and syphilis.

Treatment: Of the greatest importance is here also cleanliness. The affected parts should be frequently washed with warm water, but soap should not be used. If ulceration is present iodoform will be very effective. There are several lotions that may be found helpful in speedily relieving

the condition. The correct way of applying this it is to moisten a piece of soft cloth preferably linen with the lotion and place around the glans in such a manner that the corona remains uncovered. To prepare an effective lotion dissolve twenty grains of alum in four ounces of water. Another lotion made of sulphate of zinc and water, one to three grains to an ounce, or of tannin, five to ten grains to the ounce of water, may also prove serviceable. It is necessary, however, to change the bandage three or four times daily.

Should the application of the lotion by means of bandage be impossible in case the prepuce cannot be pulled over the glans a syringe will have to be employed for the purpose of making a tepid water injection into parts every few hours. This is to wash away the accumulated secretions and it is advisable to use one of the above recommended lotions for bathing of the inflamed glans, this lotion should be lessened in strength, if it produces a smarting sensation. What has already been stated with reference to Phimosis, we repeat here again that a patient suffering from Balanitis will find permanent relief only from the operation of circumcision.

DISEASES OF THE PROSTATE GLAND

The prostate gland is one of the most frequent causes of trouble of the sexual organs. It is a somewhat chestnut-shaped gland, situated roughly speaking between the base of the bladder and the rectum. It is subject to inflammation and to the growths of tumors. It consists of both glandular and muscular tissue and is especially liable to enlargement which becomes more common with advancing age. The symptoms produced by an enlarged prostate are very numerous. The first indication of this disorder is disturbance of urination. In very serious cases the passage through the urethra of both Urine and semen is blocked, a condition that causes a dangerous inflammation of the bladder and testes. Besides the urinary symptoms the patient complains of other troubles. The inflammation is apt to lead to the formation of an abscess which may break internally thus creating pus or matter flowing continually from the urethra

causing much pain and suffering. As a rule the patient in general becomes irritable, disinclined to work and restless.

The treatment of such cases is a very difficult problem, because, generally, when the patient decides to consult a physician the disease has already gained much headway and little can be done for him, except the use of a catheter and this method sooner or later develops inflammation and sepsis. When an injury (blow or bruise) has produced a state of inflammation and swelling, the patient should apply to the perineum cloths wrung out of hot water, on which may be sprinkled a little laudanum. Some authorities advise a sitz-bath in hot water. Rest and a light diet are of the greatest importance; the patient should drink large quantities of flaxseed-tea.

PRIAPISM

An unnatural and involuntary congestion and erection of the penis is called Priapism. It may originate in injuries of the brain or spinal cord. Other causes are mental overexertion and worry. In boys priapism may be due to the presence of worms in the rectum, stone in the bladder or a contracted foreskin. This condition in adults is sometimes due to long abstinence and sometimes no apparent cause can be found.

Treatment: The treatment, naturally, depends upon the cause. It may be a faulty diet that causes the trouble in which case it is necessary to make a change in nutrition. In many cases nothing more is required than to "take it easy" for a time, keep the bowels open, drink much cold water and bathe the organ frequently in cold water. If the erections are accompanied by severe pain a warm bath will bring relief. Camphor two grains taken in capsules is often an effective means to allay the marital desire.

STRICTURE

Stricture is a narrowing or constriction of any part of the urethra. There are two kinds of stricture, the muscular or spasmodic and the permanent or organic. It may be caused by gonorrhoea or by some other inflammation of the urethra. Spasmodic stricture is of very little importance.

A symptom of stricture is a change in the size and character of the urinary stream. Besides being smaller in size than usual, it may be going either to one side or downward, or may become corkscrew shaped, or it may split in two or three different directions. A stricture is usually not noticed until it becomes tight enough to obstruct the passage of the water or the semen through the urethra, hence this condition may exist for years before it is recognized. One of the commonest symptoms of stricture is a gleety discharge from the urethra, but it may be so scanty as to escape notice.

The most frequent cause of stricture is gonorrhoea, as already stated. The chordee which accompanies stricture, when "broken" causes stricture. The term chordee applies to erections attended by a curving of the penis downward. That is, knowing no remedy and unable to endure the pain, the patient by means of a violent blow with fist on the penis breaks the curve; it breaks the chordee but also the member and is usually followed by an organic stricture of the most obstinate kind. The sexual symptoms of stricture are weakened or imperfect erections, premature expulsions, diminished pleasure in sexual intercourse and a constantly present burning sensation in the urethral canal. Strong fluids injected into the penis in gonorrhea may also produce stricture. In some cases of stricture the patient may have a complete retention of urine being unable to pass a single drop. Many other symptoms may arise in connection with stricture such as pains in the urethra, the testicles, the rectum, the perineum and very often it extends up to loins and various other parts of the body. The walls of the bladder thicken, the urine decomposes and is streaked with blood.

Stricture may also produce a condition known as extravasation. The weakened membrane behind the stricture may ulcerate and give way, allowing the urine to escape into the tissue around the urethral canal. If the escaping quantity is considerable the result is usually an infiltration of urine, and eventually this condition results in gangrene and unless the destructive work of this process is soon checked, large portions of the tissue decay. Many persons may have a stricture for years without experiencing any of the symptoms mentioned, but sooner or later, serious complications are sure to follow. Strictures in all forms should be treated by a competent

surgeon, who will employ the treatment known as "gradual dilatation" by means of a sound. The patient is instructed in the use of the instrument, thus enabling him to perform the "operation" himself. One important feature in the application of the sound is the regulation of the intervals to be allowed between each introduction of the instrument. All strictures do not yield to this treatment. If stretching and dilating prove ineffective an operation may become necessary, especially in very obstinate cases.

VENEREAL DISEASES

GONORRHOEA AND GLEET

Gonorrhoea, sometimes called urethritis, is an inflammation of the urethra, caused by a germ called gonococcus. The disease is acquired by contact of the discharge with the mucous membrane of the urethra, in other words through sexual intercourse with a woman suffering from this disease. In some cases gonorrhoea may be conveyed by objects soiled with the discharge. It takes some time for the germ to grow and develop. On the average from two or three days to a week, and in some cases as much as three weeks may elapse before acute symptoms make their appearance. The mucous membrane of the lower part of the bowels and the eyes are also subject to the disease through contact with the discharge.

Symptoms: The earliest symptoms are pricking sensations at the opening of the urinary canal, with beginning inflammation, swelling and a thin sticky discharge, which at first is grayish-white in color. Pain may be constant, or only during urination or immediately after it. The disease, if no complications set in, may end in recovery within six weeks under proper treatment. However, complications are very frequent and the disorder often terminates in a chronic inflammation which may persist for years.

The first stage usually continues about four or five days with increasing severity. The glands in the groin swell and become painful, involuntary erection of the penis increases the patient's suffering. By the end of the second week the height of the acute stage has been reached and there is a very gradual recession of the symptoms. The discharge is less profuse,

urination less painful, but things remain without much change until the last stage when the symptoms abate rapidly.

Treatment: The treatment of gonorrhoea is of a general hygienic character, in the administering of medicine internally and using injections into the urethra. Rest, first of all, is the most important requisite. Taking things easy is a good motto to be adopted by the patient. Of course, it need hardly be said that no intelligent person will attempt to treat himself. If the patient can afford it, he should stay at home and in bed for several days. The diet consists of large quantities of water or milk with bread, cereals, potatoes and vegetables—alcohol in any form is to be avoided. Sexual intercourse is harmful at any stage of the disease and the bowels must be kept open. The penis should be bathed in hot water several times a day to reduce the inflammation and keep the organ clean. Hot baths are very useful, especially when taken as sitz baths or hip baths. The patient should wash his hands after touching the penis or the clothes, cottons, etc., which have become soiled with the discharge, to eliminate the danger of transmitting the pus from urethra to the eyes. Painful erections may be relieved by bathing the penis in cold water, urinating every two hours and taking twenty grains of sodium bromide at night in water. After the swelling and pain have subsided local treatment is in order.

The so-called abortive plan of treatment, consisting of throwing into the urethra within the first forty-eight hours of inception a very strong solution, usually nitrate of silver, is damnable, because it is often the cause of dangerous complications, such as inflammation of the bladder and of the testes. If injections with medicated fluids are employed, this should be done under the supervision of a competent physician and by no means upon advice of an advertising quack or a druggist or a well-meaning friend. There is no speedy method to cure gonorrhoea, and if the patient wishes to get rid of the disease he must be told, in case he shouldn't know it himself, that an abstemious and continent life is the best remedy. If there is a feeling of discomfort in the testicles a suspensory bandage should be worn. The medicine most commonly employed in the first stages of the

disease is balsam copaiba, ten grains, or oleoresin of cubebs, five grains, or both together, three times a day after meals in capsules.

As we have already stated, it is not advisable to use injections during the acute stage. In mild cases injections may be employed. The agent used for this purpose is sulphate of zinc, three grains to the ounce of water. Another prescription is: Diluted solution of sub-acetate of lead, six ounces, sulphate of zinc, twelve grains, to be used as an injection three or four times a day.

Many patients have an idea that the disappearance of the discharge is an evidence of the cure of the disease. Experience shows, however, as already referred to, that the disease may lapse into a latent or chronic form and remain dormant, without visible symptoms, for a prolonged period, while susceptible of being revived under the influence of alcoholic stimulants or sexual intercourse. It is of the greatest importance that the treatment should be continued until an examination of the secretions from the urethra has furnished the evidence that all disease germs have been destroyed.

GLEET

Gleet is in reality a chronic gonorrhoea and the remedies which we have described for the treatment of gonorrhoea in the declining stage are equally effectual in gleet. Gleet is often a symptom of a stricture in which case it often hangs on with a persistency that causes the patient to despair of all hope of ever being cured.

Another cause of a gleet discharge, besides stricture, is an inflamed condition of the urethra; gleet may also develop from enlargement of the prostate gland, inflammation of the seminal vesicles and various prostatic disorders.

From what has been said it is evident that the treatment of gleet depends upon establishing the cause. Some persons suffering from gleet need probably only a constitutional treatment, which should begin with a tonic to build up the entire system. Of all the tonic remedies tincture of chloride of iron is the most effectual. It is usually given together with tincture of

cantharides in the following combination: Tincture of cantharides, two drachms; dose, fifteen drops in a half-glass of water three times a day. Other forms of gleet require special treatment. Some physicians, in obstinate cases, make use of the steel sound, even though no stricture exists. A well oiled steel instrument as large as the opening of the penis will admit, is introduced into the bladder and immediately withdrawn. This method seldom fails to bring about the desired result.

CHANCROID

Chancroid, also called soft chancre or soft sore to distinguish it from hard chancre or syphilitic chancre, is a small ulcer occurring on the genitals. It is purely of local nature, never causing constitutional symptoms. Chancroid is very infectious and may give rise to other chancres if the pus discharged touches a delicate part of the patient's own skin. This is the meaning of term Auto-inoculable; a person having a chancroid is as liable to be poisoned by his own ulcer, as is a healthy individual. While chancres are usually single, chancroid are commonly multiple. The patient may have numerous ulcers. This disease is also due to a germ. The little sores begin as yellow spots surrounded by a red border: these spots develop into pimples and they fill with pus, when they are called pustules; they burst and discharge a little bloody pus, forming an ulcer which rests upon a soft base.

The chancroids usually appear a very short time after the infection, that is from 12 to 24 hours after intercourse. If properly treated it can be quickly and surely cured, but if the patient tries to be his own doctor, or falls into the hands of a quack the condition may become very serious. It keeps on spreading and may assume such a malignant character that a portion of the penis is destroyed. If gangrene sets in the whole prepuce or glans may be eaten away. Chancroid may cause a number of complications such as inflammation, erysipelas, phimosis, paraphimosis, gangrene, simple bubo and virulent bubo.

Treatment: The aim of the surgeon in the treatment of chancroid is, first of all, a complete destruction of the ulcerated surface. With others nitrate of silver is often used in such cases, but they are only effectual in

the early stage of infection. Nitric acid is regarded as the best caustic. The method of its application is simple. A drop of the acid is allowed to fall upon the ulcered surface and special care must be taken to absorb at once the acid with a moistened sponge to prevent its scattering over the sound skin. Another treatment besides cauterization consists in the application of dry lint frequently renewed. Cleanliness is of the greatest importance in this disease. Iodoform-powder is also frequently used in the treatment of chancroid. When the chancroids are spreading over much surface the patient should be treated by a surgeon.

BUBOES

Bubo is frequently the result of neglected or maltreated chancroid; it is the name given to inflammation or enlargement of the glands in the groin. Van Buren divides buboes into three varieties: namely, simple, virulent and syphilitic. A bubo may also occur with gonorrhoea, syphilitic chancre and with various inflammatory injuries. Syphilitic bubo does not suppurate, while chancroid bubo usually does, but may not; virulent bubo always ends in suppuration.

Symptoms: Bubo in its simple form is a small, oval-shaped swelling in the groin, very tender and painful when touched. If not promptly treated the swelling grows larger, the pain increases and the skin over it turns red; a yellow spot is then discovered, finally it bursts and after discharging pus for a few days it dries up and heals. The diagnosis of the various forms of bubo is difficult and the best way to make sure of the true nature of the sore is a Wassermann test.

Treatment: Rest and a proper diet are the most efficacious remedies. Rest in bed, and the application of light poultices will usually heal the bubo. In case of suppuration the ulcer should be opened early. But all these cases must be treated by a physician who alone is able to determine the nature of the disturbance.

GONORRHOEA SHOULD BE REGARDED AS A SERIOUS DISEASE

Gonorrhoea and Syphilis are among the greatest scourges of humanity. There would be much less unhappiness and ill-health in this world if these

two diseases had never existed. The contagiousness of the gonorrhoeal discharge is terrible. Thousands of children who are deprived of nature's precious gift, the eyesight, are so on account of gonorrhoea. Many men may not be aware of the great danger and the dreadful consequences until the great wrong has been committed. It is surely a very difficult task for a physician, who values his reputation and responsibility, to decide when a man who has been suffering with gonorrhoea may be pronounced cured and allowed to enter into matrimony. The conditions, usually guiding the physician in his decision are: The discharge must have ceased. The urine must be clear. The secretion from the prostate gland must be free from pus and gonococci; there must be no stricture and no patches in urethra, and finally a blood test, similar to the Wassermann blood test for spyhilis, must be negative.

The period of time which should elapse after the disappearance of the last evidence of the disease varies from three months to one year. It sometimes happens that a patient has a minute amount of discharge in the urine after the three months period, but he may be permitted to marry after an examination of the discharge and it has been ascertained that neither gonococci and germs are present. Though the usual cause of gonorrhoea is contact with an infected woman, it may also be contracted by contact with infected towels, closet seats and the handling of utensils in public comfort stations or elsewhere.

SYPHILIS

Syphilis, like gonorrhoea, is a very severe contagious disease. It is of long duration, having an acute and chronic stage. A person can become infected with syphilis in two ways, directly and indirectly. The most frequent infection is usually transmitted from person to person during sexual intercourse. The indirect way of infection takes place through contact with objects handled by infected persons. Syphilis may also be, and often is, inherited from parents, and is then called hereditary or congenital syphilis.

Acquired syphilis may be divided into three stages: the primary, the secondary and the tertiary. The first stage is characterized by the appear-

ance of a pimple or sore on the surface of the sexual organ, not usually earlier than two, nor later than five or seven weeks after incubation. The initial sore begins as a small spot of excoriation, dark red in color at first, but finally becoming copper red. The surface is smooth and shining and destitute of granulations. The secretion is serous and profuse. Usually there is a single erosion. It finally develops into a superficial erosion, with purplish zone, sloping sides, and red shining floor. There are several kinds of sores which have no connection with syphilis and yet may resemble the syphilitic sore so closely that it becomes impossible to distinguish between them. They are known as the silvery spot, the dry papule or patch, the umbilicated papule, the purple necrotic papule and the ecthymatous chancre.

The secondary stage appears in six or seven weeks after the initial sore and is characterized by the occurrence of a copper colored rash over the body, by mucous patches, by falling out of the hair, by general enlargement of the gland, by eye troubles, etc. Sometimes a pimply or scaly is seen following this or in place of the red rash. At about or preceding this period other symptoms may develop, such as fever, headache, nausea, loss of appetite, sleeplessness. Moist patches may appear on the skin, in the armpits, between the toes, and about the rectum. There is also a sore throat, and frequently grayish patches appear on the inside of the cheeks, lips and tongue. These symptoms do not always occur at the same time and some may be entirely absent or less noticeable than others. While the duration of this stage is generally given between one and two years, no definite time can really be named, for the length depends a great deal upon the efficacy of the treatment and the virulence of the infection. The tertiary or third stage comes on after months or years, or in those subject to treatment, may not come at all. This stage is characterized by swellings called gummata, by ulcers, and by affections of the bones, the viscera, nerves, brain and arteries; in fact, every internal organ is susceptible to syphilitic change. Many affections of the internal organs—the heart, lungs, liver, kidneys, brain and cord, which were formerly attributed to other causes, are now recognized as the effect of syphilis.

The first signal that tells us that a syphilis infection has taken place is known under the name of chancre, hard chancre, primary sclerosis, etc. Chancres that are on the penis or scrotum are called genital, while those formed on other parts of the body, like the lips, the tongue, the tonsils, the chin, the fingers, etc., are called extragenital. The most characteristic feature of chancre is its hardness; in many cases it is as hard as cartilage. However, many chancres are not characteristic, and in such cases a physician must be very cautious before committing himself, unless the finding of "spirochaeta pallida Schaudinn" removes all doubt as to the nature of the disease.

It is a grave error to brand a person as syphilitic if he has not acquired the disease and to cause him mental distress by the thought that he has contracted this loathsome malady. Yet it is just as grave an error, perhaps more so, taking in account the possible consequences, to turn a syphilitic person away with a wrong diagnosis, to transmit his disease to others and to be himself still further harmed by the unchecked ravages before it is properly recognized and correct treatment instituted.

Though syphilis can be controlled, the question as to whether it may be completely cured is not so well decided. However, cases have been reported showing that the virus of syphilis has been and may be completely eradicated from the system. The question when may a syphilitic marry has been answered by many good authorities to the effect that marriage is quite safe one year after the disappearance of all syphilitic symptoms. Other authorities demand, however, that no syphilitic patient should marry before five years have elapsed from the day of infection. Other conditions are: He must have received thorough systematic treatment, for at least two years; for at least one year before the intended marriage, the patient must have been absolutely free from any signs of syphilis.

Treatment: The cure of this disease, as far as this is possible, is brought about by the use of mercury and iodide of potassium. Mercury is used for the treatment of the early and iodide for the late symptoms. Mercury has always been and still remains the best drug we have in the treatment of syphilis. In the words of Prof. Van Buren: "Mercury in the

early stages of syphilis is especially potent. Under its kindly influence the chancre heals, the early eruptions fade. . . . Properly administered, it may be taken for years without any injury to the patient." The drug next in value in the treatment of the disease is salvarsan. While this remedy has not turned out to be such a great healer as the doctors at first believed, it is still one of the most effective drugs we possess. We herewith give a few prescriptions used by some of the best known authorities. Some physicians combine the iodide of potassium with the mercury in the same prescription and for a prolonged treatment this method is regarded the best. The iodides are not considered of a special value in the early stage of syphilis. The following is a New York Hospital formula and of special value in case of general debility: Bichloride of mercury, four grains, tincture of chloride of iron, one ounce; dose, ten drops in water after meals. The following prescription contains both mercury and iodide of potassium and is useful in a variety of cases: Bichloride of mercury, one grain, iodide of potassium, two drachms, compound tincture of gentian, four ounces; dose, a teaspoonful three or four times a day.

Of course the drug treatment alone does not constitute all there is to the treatment of syphilis. The patient's general health must be toned up to the highest point. He must have good, nutritious food, take hot baths, particularly sulphur baths, frequently, must have plenty of fresh air and must keep his teeth and mouth in perfect condition.

The syphilitic eruption known as "mucous patches" requires some consideration here, though we have already referred to them. The mucous may be round or oval; they are usually moist, but when occurring on the skin they are occasionally dry and wart-like. These patches are apt to ulcerate if neglected. They are found in form of ulcers on the lips and in the throat. The patient thus affected must exercise the utmost care to guard against the danger of spreading the disease among his companions or the members of his family.

The first thing to be done in such cases is to remove the source of irritation. Mucous patches about the scrotum, anus and between the toes require the most thorough cleanliness. "Ricords treatment" consists in

them with calomel. Van Buren recommends a powder of equal parts of calomel, oxide of zinc and iodoform to dust the surfaces with.

Of syphilitic affection of the bones, we have already given a short account. It occurs usually in the third stage; though any bones in the body may be thus affected, it seems that the disease by preference attacks superficial bones, the bones of the skull, the clavicle, the ribs, the thin bones of the nose and pharynx and others.

THE DANGERS AND TREACHERY OF SYPHILIS

Syphilis is an infectious blood disease caused by a germ known as spirochaeta pallida. It is a dangerous disease and requires many years of cure. It is acquired thorugh sexual intercourse, it may be inherited and is often transmitted through accidental contact with sources of infection.

Congenital Syphilis: Children born with syphilis of syphilitic parents show the disease at birth or usually within one or two months. They present a wasted appearance, suffer continually from snuffles or nasal catarrh, have sores and cracks about the lips and troublesome skin eruptions. The internal organs are almost invariably diseased and sixty to eighty per cent of the cases fortunately die. One of the most characteristic symptoms is a certain notching of the upper central incisor teeth. This condition was first described by Dr. Jonathan Hutchinson, a famous London physician, and such teeth are known as Hutchinson's teeth. This abnormality is not seen in the first teeth, but only in the permanent or secondary set. Another frequent symptom of hereditary syphilis is an inflammation of the cornea of eye, keratitis, that may result in blindness. A third not infrequent symptom is deafness. The hearing may be perfect at first, but suddenly, when the child is between eight and eighteen years old, the hearing becomes defective and total deafness may result.

GLOSSARY

Accoucher.—Surgeon in child-birth.
Allantoise.—Membrane connecting the fœtus and chorion.
Amenorrhœa.—Suppression of the menses.
Anteversion.—Tipped forward.
Anteflexion.—Bent backward.
Antiphlogistic.—Opposing inflammation.
Aperient.—Mildly cathartic.
Astringent.—Binding.
Cathartic.—Laxative.
Chorion.—The external fœtal membrane.
Colon.—The large intestine.
Congestion.—Overcrowded bloodvessels.
Cutaneous.—Pertaining to the skin.
Diaphragm.—Parietal muscle between the chest and abdomen.
Diagnosis.—Determination of disease.
Diphtheria.—Malignant disease of the throat.
Dysmenorrhœa.—Painful menstruation.
Emaciation.—State of being reduced to leanness.
Embryo.—Egg.
Enciente.—Pregnant.
Enema.—Injection.
Fallopian Tubes.—Oviducts.
Febrifuge.—Medicine to remove or mitigate fever.
Flatulence.—Wind in stomach or intestines.
Fœces.—Discharge from the bowels.
Fœtus.—Child in the womb.
Fœtal.—Pertaining to the fœtus.
Fomentation.—Hot applications to the body.
Fimbriated.—Finger-like.
Genitalia.—Birthplace of the egg.
Gestation.—Period of growth of child in the womb.
Graafian Follicle.—Ovarian cavity containing egg.
Hemorrhoids.—Piles—Tumors in and about the anus.
Hygiene.—The art of preserving health
Intra-Uterine.—Within the womb
Labia.—Lips of the vagina.
Laxative.—Cathartic.
Malaise.—Sickness. Discomfort.

Mammary.—Pertaining to the breasts.
Massage.—Rubbing and kneading the body.
Meno-Pause.—Change of life.
Menstruation.—Monthly flow from the womb.
Menorrhagia.—Profuse menstruation.
Nates.—The buttocks.
Obstetrics.—Midwifery.
Os Uteri.—Mouth of the womb.
Osseous.—Bony.
Ova.—Eggs. Plural of egg.
Ovary.—Generative organ in which the ova are developed.
Oviducts.—Fallopian tubes.
Ovulation.—Laying of the egg.
Ovum.—An egg.
Parietes.—Walls of a cavity.
Parturition.—Child-birth.
Pelvis.—Lower part of the abdomen.
Peritoneum.—The membrane lining the walls and covering the organs in the abdomen.
Peristaltic.—Worm-like movements of the bowels.
Placenta.—After-birth.
Pre-natal.—Before birth.
Prolapsus Uteri.—Falling of the womb.
Pulmonary.—Pertaining to the lungs.
Rectum.—Lower portion of the bowels.
Renal.—Pertaining to the kidneys.
Retroversion.—Falling backward.
Retroflection.—Bending backward.
Saline.—Having the qualities of salt.
Salivation.—Unnatural flow of saliva.
Sanguineous.—Bloody.
Umbilicus.—Navel.
Urinary.—Pertaining to the urine.
Uterus.—The womb.
Vagina.—Passage leading to the womb.
Varicose veins.—Veins permanently dilated with blood.
Vesicle.—Small cavity or sac in the human body.
Vulva.—Outer lips of the vagina.

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